

Sequence Listing

<110> Baker, Kevin
Botstein, David
Eaton, Dan
Ferrara, Napoleone
Filvaroff, Ellen
Gerritsen, Mary
Goddard, Audrey
Godowski, Paul
Grimaldi, Christopher
Gurney, Austin
Hillan, Kenneth
Kljavin, Ivar
Napier, Mary
Roy, Margaret
Tumas, Daniel
Wood, William

<120> SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
ACIDS ENCODING THE SAME

<150> 60/067,411

<150> 60/069,334

<150> 60/069335

<150> 60/069,278

<150> 60/069,425

<150> 60/069,696

<150> 60/069,694

<150> 60/069,702

<150> 60/069,870

<150> 60/069,873

<150> 60/068,017

<150> 60/070,440

06301

<151> February 9, 1998

<151> February 9, 1998

<151> February 25, 1998

<151> December 16, 1998

<151> December 22, 1998

<151> July 28, 1999

<151> September 16, 1998

<151> December 1, 1998

<151> December 16, 1998

<151> December 22, 1998

<151> March 3, 1999

<151> June 22, 1999

<151> September 15, 1999

<151> November 30, 1999

<151> November 30, 1999

<151> December1, 1999

<151> December 16, 1999

[151] February 11, 2000

151> February 22, 2000

<150> PCT/US00/05841
 <151> March 2, 2000

<150> PCT/US00/08439
 <151> March 30, 2000

<150> PCT/US00/14042
 <151> May 22, 2000

<150> PCT/US00/20710
 <151> July 28, 2000

<150> PCT/US00/32678
 <151> December 1, 2000

<150> PCT/US01/06520
 <151> February 28, 2001

<160> 120

<210> 1
 <211> 2454
 <212> DNA
 <213> Homo Sapien

<400> 1
 ggactaatct gtgggagcag tttattccag tatcaccacag ggtgcagcca 50
 caccaggact gtgttgaagg gtgttttttt tctttttaaata gtaatacctc 100
 ctcatcttttt cttctttacac agtgtctgag aacattttaca ttatagataa 150
 gtagtacatg gtggataact tctactttta ggaggactac tctctttctga 200
 cagtcctaga ctgggtcttct acactaagac accatgaagg agtatgtgct 250
 cctattattc ctgggtttgt gctctgccaa acccttcttt agcccttcac 300
 acatcgact gaagaatatg atgctgaagg atatggaaga cacagatgat 350
 gatgatgatg atgatgatga tgatgatgat gatgaggaca actctctttt 400
 tccaacaaga gagccaagaa gccatttttt tccatttgat ctgtttccaa 450
 tgtgtccatt tggatgtcag tgctattcac gagttgtaca ttgctcagat 500
 ttaggtttga cctcagtcac aaccaacatt ccatttgata ctggaatgct 550
 tgatcttcaa aacaataaaa ttaaggaaat caaagaaaat gatttttaaag 600
 gactcacttc actttatggc ctgatcctga acaacaacaa gctaacgaag 650
 attcaccacaa aagcctttct aaccacaaag aagttgcgaa ggctgtatct 700
 gtcccacaat caactaagtg aataaccact taatcttccc aatcattag 750
 cagaactcag aattcatgaa aataaagtta agaaaatata aaaggacaca 800

ttcaaaggaa tgaatgcttt acacgttttg gaaatgagtg caaacctct 850
 tgataataat gggatagagc caggggcatt tgaaggggtg acggtgttcc 900
 atatcagaat tgcagaagca aaactgacct cagttcctaa aggcttacca 950
 ccaactttat tggagcttca cttagattat aataaaattt caacagtgga 1000
 acttgaggat tttaaacgat acaaagaact acaaaggctg ggcctaggaa 1050
 acaacaaaat cacagatata gaaaatggga gtcttgctaa cataccacgt 1100
 gtgagagaaa tacatttgga aaacaataaa ctaaaaaaaaa tcccttcagg 1150
 attaccagag ttgaaatacc tccagataat cttccttcat tctaattcaa 1200
 ttgcaagagt gggagtaaata gacttctgtc caacagtgcc aaagatgaag 1250
 aaatctttat acagtgcaat aagtttattc aacaaccgg tgaaatactg 1300
 ggaaatgcaa cctgcaacat ttcgttgtgt tttgagcaga atgagtgttc 1350
 agcttgggaa ctttggaaatg taataattag taattggtaa tgtccattta 1400
 atataagatt caaaaatccc tacatttgga atacttgaac tctattaata 1450
 atggtagtat tataatatac agcaaatac tattctcaag tggtaagtcc 1500
 actgacttat tttatgacaa gaaatttcaa cggaattttg ccaaactatt 1550
 gatacataag ggggtgagag aaacaagcat ctattgcagt ttcctttttg 1600
 cgtacaaatg atcttacata aatctcatgc ttgaccattc ctttcttcat 1650
 aacaaaaaag taagatattc ggtatttaac actttgttat caagcacatt 1700
 ttaaaaagaa ctgtactgta aatggaatgc ttgacttagc aaaatttgtg 1750
 ctctttcatt tgctgttaga aaaacagaat taacaaagac agtaatgtga 1800
 agagtgcatt acactattct tattctttag taacttgggt agtactgtaa 1850
 tatttttaat catcttaaag tatgatttga tataatctta ttgaaattac 1900
 cttatcatgt cttagagccc gtctttatgt ttaaaactaa tttcttaaaa 1950
 taaagccttc agtaaagtgt cattaccaac ttgataaatg ctactcataa 2000
 gagctggttt ggggctatag catatgcttt ttttttttta attattacct 2050
 gatttaaaaa tctctgtaaa aacgtgtagt gtttcataaa atctgtaact 2100
 cgcattttta tgatccgcta ttataagctt ttaatagcat gaaaattggt 2150
 aggctatata acattgccac ttcaactcta aggaatattt ttgagatata 2200
 cctttggaag accttgcttg gaagagcctg gacactaaca attctacacc 2250

094463-0830

<400> 2

5

09944403-083001

Ile	Glu	Pro	Gly	Ala	Phe	Glu	Gly	Val	Thr	Val	Phe	His	Ile	Arg
				215					220					225
Ile	Ala	Glu	Ala	Lys	Leu	Thr	Ser	Val	Pro	Lys	Gly	Leu	Pro	Pro
				230					235					240
Thr	Leu	Leu	Glu	Leu	His	Leu	Asp	Tyr	Asn	Lys	Ile	Ser	Thr	Val
				245					250					255
Glu	Leu	Glu	Asp	Phe	Lys	Arg	Tyr	Lys	Glu	Leu	Gln	Arg	Leu	Gly
				260					265					270
Leu	Gly	Asn	Asn	Lys	Ile	Thr	Asp	Ile	Glu	Asn	Gly	Ser	Leu	Ala
				275					280					285
Asn	Ile	Pro	Arg	Val	Arg	Glu	Ile	His	Leu	Glu	Asn	Asn	Lys	Leu
				290					295					300
Lys	Lys	Ile	Pro	Ser	Gly	Leu	Pro	Glu	Leu	Lys	Tyr	Leu	Gln	Ile
				305					310					315
Ile	Phe	Leu	His	Ser	Asn	Ser	Ile	Ala	Arg	Val	Gly	Val	Asn	Asp
				320					325					330
Phe	Cys	Pro	Thr	Val	Pro	Lys	Met	Lys	Lys	Ser	Leu	Tyr	Ser	Ala
				335					340					345
Ile	Ser	Leu	Phe	Asn	Asn	Pro	Val	Lys	Tyr	Trp	Glu	Met	Gln	Pro
				350					355					360
Ala	Thr	Phe	Arg	Cys	Val	Leu	Ser	Arg	Met	Ser	Val	Gln	Leu	Gly
				365					370					375

Asn Phe Gly Met

<210> 3
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 3
 ggaaatgagt gcaaaccctc 20

<210> 4
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 4
 tcccaagctg aacactcatt ctgc 24

<210> 5
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 5
gggtgacggt gttccatata agaattgcag aagcaaaact gacctcagtt 50

<210> 6
<211> 3441
<212> DNA
<213> Homo Sapien

<400> 6
cggacgcgtg ggcggacgcg tgggcccgcg gcaccgcccc cggcccggcc 50
ctccgccctc cgcaactcgcg cctccctccc tccgcccgtt cccgcgcctt 100
cctccctccc tctcccccag ctgtcccgtt cgcgtcatgc cgagcctccc 150
ggccccgccc gccccgctgc tgcctcctcg gctgctgctg ctccggctccc 200
ggccggcccc cggcgccggc ccagagcccc ccgtgctgcc catccgttct 250
gagaaggagc cgctgcccgt tcggggagcg gcaggctgca ccttcggcgg 300
gaagggtctat gccttgagcg agacgtggca cccggaccta gggcagccat 350
tcggggtgat gcgctgcgtg ctgtgcgcct gcgaggcgcc tcagtggggt 400
cgccgtacca ggggccctgg cagggtcagc tgcaagaaca tcaaaccaga 450
gtgcccacc ccggcctgtg ggcagccgcg ccagctgccg ggacactgct 500
gccagacctg cccccaggag cgcagcagtt cggagcggca gccgagcggc 550
ctgtccttcg agtatccgcg ggacccggag catcgagtt atagcgaccg 600
cggggagcca ggcgtgagg agcgggcccg tggtagcggc cacacggact 650
tcgtggcgct gctgacaggg ccgaggtcgc aggcggtggc acgagcccga 700
gtctcgctgc tgcgtctag cctccgcttc tctatctcct acaggcggct 750
ggaccgccct accaggatcc gcttctcaga ctccaatggc agtgtcctgt 800
ttgagcacc tgcagcccc acccaagatg gcctgggtctg tggggtgtgg 850
cgggcagtgc ctccgttgct tctgcggctc cttagggcag aacagctgca 900
tgtggcactt gtgacactca ctacccttc aggggaggtc tgggggcctc 950
tcatccggca ccgggccctg gctgcagaga ccttcagtgc catcctgact 1000
ctagaaggcc cccacagca gggcgtaggg ggcacaccc tgctcactct 1050

0944403-083001

cagtgcacaca gaggactcct tgcatttttt gctgctcttc cgagggctgc 1100
 tggaacccag gagtggggga ctaacccagg ttcccttgag gctccagatt 1150
 ctacaccagg ggcagctact gcgagaactt caggccaatg tctcagccca 1200
 ggaaccaggc tttgctgagg tgctgccc aa cctgacagtc caggagatgg 1250
 actggctggg gctgggggag ctgcagatgg ccctggagtg ggcaggcagg 1300
 ccagggctgc gcatcagtg acacattgct gccaggaaga gctgagacgt 1350
 cctgcaaagt gtcctttgtg gggctgatgc cctgatccca gtccagacgg 1400
 gtgctgccgg ctcagccagc ctcacgctgc taggaaatgg ctccctgatc 1450
 tatcaggctgc aagtggtagg gacaagcagt gaggtggtag ccatgacact 1500
 ggagaccaag cctcagcggg gggatcagcg cactgtcctg tgccacatgg 1550
 ctggactcca gccaggagga cacacggccg tgggtatctg ccctgggctg 1600
 ggtgcccag gggctcatat gctgctgcag aatgagctct tctgaacgt 1650
 gggcaccaag gacttcccag acggagagct tcgggggcac gtggctgcc 1700
 tgccctactg tgggcatagc gcccgccatg acacgctgcc cgtgcccta 1750
 gcaggagccc tgggtgtacc ccctgtgaag agccaagcag cagggcacgc 1800
 ctggctttcc ttggataccc actgtcacct gcactatgaa gtgctgctgg 1850
 ctgggcttgg tggctcagaa caaggcactg tcaactgcca cctccttggg 1900
 cctcctggaa cgccagggcc tcggcggtg ctgaagggat tctatggctc 1950
 agaggccag ggtgtggtga aggacctgga gccggaactg ctgcggcacc 2000
 tggcaaaagg catggcctcc ctgatgatca ccaccaagg tagccccaga 2050
 ggggagctcc gagggcaggt gcacatagcc aaccaatgtg aggttggcgg 2100
 actgcgctg gaggcggccg gggccgagg ggtgcggcg ctgggggctc 2150
 cggatacagc ctctgctgc cgccctgtg tgccctgtct cccggcccta 2200
 gcgcccgcga aacctggtg tcttggcgcg ccccgagacc ccaacacatg 2250
 cttcttcgag gggcagcagc gccccacgg ggctcgctgg gcgcccact 2300
 acgacccgct ctgctcactc tgcacctgcc agagacgaac ggtgatctgt 2350
 gaccgggtg tgtgcccacc gccagctgc ccacacccgg tgcaggctcc 2400
 cgaccagtgc tgccctgttt gccctgagaa acaagatgtc agagacttgc 2450
 cagggtgcc aaggagccgg gaccaggag agggctgcta ttttgatgg 2500

Arg	Cys	Val	Leu	Cys 80	Ala	Cys	Glu	Ala	Pro 85	Gln	Trp	Gly	Arg	Arg 90
Thr	Arg	Gly	Pro	Gly 95	Arg	Val	Ser	Cys	Lys 100	Asn	Ile	Lys	Pro	Glu 105
Cys	Pro	Thr	Pro	Ala 110	Cys	Gly	Gln	Pro	Arg 115	Gln	Leu	Pro	Gly	His 120
Cys	Cys	Gln	Thr	Cys 125	Pro	Gln	Glu	Arg	Ser 130	Ser	Ser	Glu	Arg	Gln 135
Pro	Ser	Gly	Leu	Ser 140	Phe	Glu	Tyr	Pro	Arg 145	Asp	Pro	Glu	His	Arg 150
Ser	Tyr	Ser	Asp	Arg 155	Gly	Glu	Pro	Gly	Ala 160	Glu	Glu	Arg	Ala	Arg 165
Gly	Asp	Gly	His	Thr 170	Asp	Phe	Val	Ala	Leu 175	Leu	Thr	Gly	Pro	Arg 180
Ser	Gln	Ala	Val	Ala 185	Arg	Ala	Arg	Val	Ser 190	Leu	Leu	Arg	Ser	Ser 195
Leu	Arg	Phe	Ser	Ile 200	Ser	Tyr	Arg	Arg	Leu 205	Asp	Arg	Pro	Thr	Arg 210
Ile	Arg	Phe	Ser	Asp 215	Ser	Asn	Gly	Ser	Val 220	Leu	Phe	Glu	His	Pro 225
Ala	Ala	Pro	Thr	Gln 230	Asp	Gly	Leu	Val	Cys 235	Gly	Val	Trp	Arg	Ala 240
Val	Pro	Arg	Leu	Ser 245	Leu	Arg	Leu	Leu	Arg 250	Ala	Glu	Gln	Leu	His 255
Val	Ala	Leu	Val	Thr 260	Leu	Thr	His	Pro	Ser 265	Gly	Glu	Val	Trp	Gly 270
Pro	Leu	Ile	Arg	His 275	Arg	Ala	Leu	Ala	Ala 280	Glu	Thr	Phe	Ser	Ala 285
Ile	Leu	Thr	Leu	Glu 290	Gly	Pro	Pro	Gln	Gln 295	Gly	Val	Gly	Gly	Ile 300
Thr	Leu	Leu	Thr	Leu 305	Ser	Asp	Thr	Glu	Asp 310	Ser	Leu	His	Phe	Leu 315
Leu	Leu	Phe	Arg	Gly 320	Leu	Leu	Glu	Pro	Arg 325	Ser	Gly	Gly	Leu	Thr 330
Gln	Val	Pro	Leu	Arg 335	Leu	Gln	Ile	Leu	His 340	Gln	Gly	Gln	Leu	Leu 345
Arg	Glu	Leu	Gln	Ala 350	Asn	Val	Ser	Ala	Gln 355	Glu	Pro	Gly	Phe	Ala 360
Glu	Val	Leu	Pro	Asn	Leu	Thr	Val	Gln	Glu	Met	Asp	Trp	Leu	Val

365														370					375				
Leu	Gly	Glu	Leu	Gln	Met	Ala	Leu	Glu	Trp	Ala	Gly	Arg	Pro	Gly									
				380					385					390									
Leu	Arg	Ile	Ser	Gly	His	Ile	Ala	Ala	Arg	Lys	Ser	Cys	Asp	Val									
				395					400					405									
Leu	Gln	Ser	Val	Leu	Cys	Gly	Ala	Asp	Ala	Leu	Ile	Pro	Val	Gln									
				410					415					420									
Thr	Gly	Ala	Ala	Gly	Ser	Ala	Ser	Leu	Thr	Leu	Leu	Gly	Asn	Gly									
				425					430					435									
Ser	Leu	Ile	Tyr	Gln	Val	Gln	Val	Val	Gly	Thr	Ser	Ser	Glu	Val									
				440					445					450									
Val	Ala	Met	Thr	Leu	Glu	Thr	Lys	Pro	Gln	Arg	Arg	Asp	Gln	Arg									
				455					460					465									
Thr	Val	Leu	Cys	His	Met	Ala	Gly	Leu	Gln	Pro	Gly	Gly	His	Thr									
				470					475					480									
Ala	Val	Gly	Ile	Cys	Pro	Gly	Leu	Gly	Ala	Arg	Gly	Ala	His	Met									
				485					490					495									
Leu	Leu	Gln	Asn	Glu	Leu	Phe	Leu	Asn	Val	Gly	Thr	Lys	Asp	Phe									
				500					505					510									
Pro	Asp	Gly	Glu	Leu	Arg	Gly	His	Val	Ala	Ala	Leu	Pro	Tyr	Cys									
				515					520					525									
Gly	His	Ser	Ala	Arg	His	Asp	Thr	Leu	Pro	Val	Pro	Leu	Ala	Gly									
				530					535					540									
Ala	Leu	Val	Leu	Pro	Pro	Val	Lys	Ser	Gln	Ala	Ala	Gly	His	Ala									
				545					550					555									
Trp	Leu	Ser	Leu	Asp	Thr	His	Cys	His	Leu	His	Tyr	Glu	Val	Leu									
				560					565					570									
Leu	Ala	Gly	Leu	Gly	Gly	Ser	Glu	Gln	Gly	Thr	Val	Thr	Ala	His									
				575					580					585									
Leu	Leu	Gly	Pro	Pro	Gly	Thr	Pro	Gly	Pro	Arg	Arg	Leu	Leu	Lys									
				590					595					600									
Gly	Phe	Tyr	Gly	Ser	Glu	Ala	Gln	Gly	Val	Val	Lys	Asp	Leu	Glu									
				605					610					615									
Pro	Glu	Leu	Leu	Arg	His	Leu	Ala	Lys	Gly	Met	Ala	Ser	Leu	Met									
				620					625					630									
Ile	Thr	Thr	Lys	Gly	Ser	Pro	Arg	Gly	Glu	Leu	Arg	Gly	Gln	Val									
				635					640					645									
His	Ile	Ala	Asn	Gln	Cys	Glu	Val	Gly	Gly	Leu	Arg	Leu	Glu	Ala									
				650					655					660									

Ala Gly Ala Glu Gly Val Arg Ala Leu Gly Ala Pro Asp Thr Ala	665	670	675
Ser Ala Ala Pro Pro Val Val Pro Gly Leu Pro Ala Leu Ala Pro	680	685	690
Ala Lys Pro Gly Gly Pro Gly Arg Pro Arg Asp Pro Asn Thr Cys	695	700	705
Phe Phe Glu Gly Gln Gln Arg Pro His Gly Ala Arg Trp Ala Pro	710	715	720
Asn Tyr Asp Pro Leu Cys Ser Leu Cys Thr Cys Gln Arg Arg Thr	725	730	735
Val Ile Cys Asp Pro Val Val Cys Pro Pro Pro Ser Cys Pro His	740	745	750
Pro Val Gln Ala Pro Asp Gln Cys Cys Pro Val Cys Pro Glu Lys	755	760	765
Gln Asp Val Arg Asp Leu Pro Gly Leu Pro Arg Ser Arg Asp Pro	770	775	780
Gly Glu Gly Cys Tyr Phe Asp Gly Asp Arg Ser Trp Arg Ala Ala	785	790	795
Gly Thr Arg Trp His Pro Val Val Pro Pro Phe Gly Leu Ile Lys	800	805	810
Cys Ala Val Cys Thr Cys Lys Gly Gly Thr Gly Glu Val His Cys	815	820	825
Glu Lys Val Gln Cys Pro Arg Leu Ala Cys Ala Gln Pro Val Arg	830	835	840
Val Asn Pro Thr Asp Cys Cys Lys Gln Cys Pro Val Gly Ser Gly	845	850	855
Ala His Pro Gln Leu Gly Asp Pro Met Gln Ala Asp Gly Pro Arg	860	865	870
Gly Cys Arg Phe Ala Gly Gln Trp Phe Pro Glu Ser Gln Ser Trp	875	880	885
His Pro Ser Val Pro Pro Phe Gly Glu Met Ser Cys Ile Thr Cys	890	895	900
Arg Cys Gly Ala Gly Val Pro His Cys Glu Arg Asp Asp Cys Ser	905	910	915
Leu Pro Leu Ser Cys Gly Ser Gly Lys Glu Ser Arg Cys Cys Ser	920	925	930
Arg Cys Thr Ala His Arg Arg Pro Pro Glu Thr Arg Thr Asp Pro	935	940	945
Glu Leu Glu Lys Glu Ala Glu Gly Ser			

<210> 8
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide probe

<400> 8
 gactagttct agatcgcgag cggccgccct tttttttttt tttt 44

<210> 9
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 9
 cggacgcgtg gggcctgcgc acccagct 28

<210> 10
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 10
 gccgctcccc gaacgggcag cggctccttc tcagaa 36

<210> 11
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 11
 ggcgcacagc acgcagcgca tcaccccgaa tggctc 36

<210> 12
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 12
 gtgctgccca tccgttctga gaagga 26

<210> 13

09544408300
 09544408300

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 13
gcagggtgct caaacaggac ac 22

<210> 14
<211> 3231
<212> DNA
<213> Homo Sapien

<400> 14
ggcggagcag ccctagccgc caccgtcgct ctgcagctc tcgtcgccac 50
tgccaccgcc gccgccgtca ctgcgtcctg gtcgccgctc ccgcgccctc 100
ccggccggcc atgcagcccc gccgcgccca ggcgcccggt gcgcagctgc 150
tgcccgcgct ggccctgctg ctgctgctgc tcggagcggg gccccgaggg 200
agctccctgg ccaaccgggt gccgcgcgcg cccttgtctg cgcgcgggcc 250
gtgcgcgcgc cagccctgcc ggaatggggg tgtgtgcacc tcgcgcctg 300
agccggaccc gcagcaccgc gccccgcgcg gcgagcctgg ctacagctgc 350
acctgccccg ccgggatctc cggcgccaac tgccagcttg ttgcagatcc 400
ttgtgccagc aacccttgct accatggcaa ctgcagcagc agcagcagca 450
gcagcagcga tggctacctc tgcatttgca atgaaggcta tgaagggtccc 500
aactgtgaac aggcacttcc cagtctccca gccactgggt ggaccgaatc 550
catggcacc cgcagcttc agcctgttcc tgctactcag gagcctgaca 600
aaatcctgcc tcgtctcag gcaacggtga cactgcctac ctggcagccg 650
aaaacagggc agaaagtgtg agaaatgaaa tgggatcaag tggaggtgat 700
cccagatatt gcctgtggga atgccagttc taacagctct gcgggtggcc 750
gcctggtatc ctttgaagtg ccacagaaca cctcagtcaa gattcggcaa 800
gatgccactg cctcactgat tttgctctgg aaggtcacgg ccacaggatt 850
ccaacagtgc tccctcatag atggacgaag tgtgaccccc cttcaggctt 900
cagggggact ggtcctcctg gaggagatgc tcgccttggg gaataatcac 950
tttattggtt ttgtgaatga ttctgtgact aagtctattg tggctttgcg 1000
cttaactctg gtggtgaagg tcagcacctg tgtgccgggg gagagtcacg 1050

0944403-03301

caaatgactt ggagtgttca ggaaaaggaa aatgcaccac gaagccgtca 1100
 gaggcaactt tttcctgtac ctgtgaggag cagtacgtgg gtactttctg 1150
 tgaagaatac gatgcttgcc agaggaaacc ttgccaaaac aacgcgagct 1200
 gtattgatgc aaatgaaaag caagatggga gcaatttcac ctgtgtttgc 1250
 cttoctgggt atactggaga gctttgccag tccaagattg attactgcat 1300
 cctagacca tgcagaaatg gagcaacatg catttccagt ctgagtggat 1350
 tcacctgcca gtgtccagaa ggatacttcg gatctgcttg tgaagaaaag 1400
 gtggaccctt gcgcctcgtc tccgtgccag aacaacggca cctgctatgt 1450
 ggacggggta cactttacct gcaactgcag cccgggcttc acagggccga 1500
 cctgtgcccc gcttattgac ttctgtgccc tcagccccctg tgctcatggc 1550
 acgtgccgca gcgtgggcac cagctacaaa tgctctgtg atccagggtta 1600
 ccatggcctc tactgtgagg aggaatataa tgagtgcctc tccgctccat 1650
 gcctgaatgc agccacctgc agggacctcg ttaatggcta tgagtgtgtg 1700
 tgctggcag aatacaaagg aacacactgt gaattgtaca aggatccctg 1750
 cgtaacgtc agctgtctga acggagccac ctgtgacagc gacggcctga 1800
 atggcacgtg catctgtgca cccgggttta cagggtgaaga gtgcgacatt 1850
 gacataaatg aatgtgacag taaccctcgc caccatgggtg ggagctgcct 1900
 ggaccagccc aatgggtata actgccactg cccgcatggt tgggtgggag 1950
 caaactgtga gatccacctc caatggaagt ccgggcacat ggcgagagac 2000
 ctaccaaca tgccacggca ctccctctac atcatcattg gagccctctg 2050
 cgtggccttc atccttatgc tgatcatcct gatcgtgggg atttgccgca 2100
 tcagccgcat tgaataccag ggttcttcca ggccagccta tgaggagttc 2150
 tacaactgcc gcagcatcga cagcgagttc agcaatgcca ttgcatccat 2200
 ccggcatgcc aggtttggaa agaaatcccg gcctgcaatg tatgatgtga 2250
 gccccatcgc ctatgaagat tacagtccctg atgacaaaacc cttgggtcaca 2300
 ctgattaaaa ctaaagattt gtaatctttt tttggattat ttttcaaaaa 2350
 gatgagatac tacactcatt taaatatttt taagaaaata aaaagcttaa 2400
 gaaatttaaa atgctagctg ctcaagagtt ttcagtagaa tatttaagaa 2450
 ctaattttct gcagctttta gtttggaaaa aatattttta aaacaaaatt 2500

09944403-033001

tgtgaaacct atagacgatg ttttaatgta ccttcagctc tctaaaactgt 2550
 gtgcttctac tagtgtgtgc tcttttctact gtagacacta tcacgagacc 2600
 cagattaatt tctgtgggtg ttacagaata agtctaataca aggagaagtt 2650
 tctgtttgac gtttgagtgc cggctttctg agtagagtta ggaaaaccac 2700
 gtaacgtagc atatgatgta taatagagta taccggttac ttaaaaagaa 2750
 gtctgaaatg ttcgttttgt ggaaaagaaa ctagttaaat ttactattcc 2800
 taacccgaat gaaattagcc tttgccttat tctgtgcatg ggtaagtaac 2850
 ttattttctgc actgttttgt tgaactttgt ggaaacattc tttcgagttt 2900
 gtttttgtca ttttcgtaac agtcgtcgaa ctaggcctca aaaacatacg 2950
 taacgaaaag gcctagcgag gcaaattctg attgatttga atctatattt 3000
 ttcttttaaaa agtcaagggt tctatattgt gagtaaatta aatttacatt 3050
 tgagttgttt gttgctaaga ggtagtaaat gtaagagagt actggttcct 3100
 tcagtagtga gtattttctca tagtgcagct ttatttatct ccaggatgtt 3150
 tttgtggctg tatttgattg atatgtgctt cttctgattc ttgctaattt 3200
 ccaaccatat tgaataaatg tgatcaagtc a 3231

<210> 15
 <211> 737
 <212> PRT
 <213> Homo Sapien

<400> 15
 Met Gln Pro Arg Arg Ala Gln Ala Pro Gly Ala Gln Leu Leu Pro
 1 5 10 15
 Ala Leu Ala Leu Leu Leu Leu Leu Leu Gly Ala Gly Pro Arg Gly
 20 25 30
 Ser Ser Leu Ala Asn Pro Val Pro Ala Ala Pro Leu Ser Ala Pro
 35 40 45
 Gly Pro Cys Ala Ala Gln Pro Cys Arg Asn Gly Gly Val Cys Thr
 50 55 60
 Ser Arg Pro Glu Pro Asp Pro Gln His Pro Ala Pro Ala Gly Glu
 65 70 75
 Pro Gly Tyr Ser Cys Thr Cys Pro Ala Gly Ile Ser Gly Ala Asn
 80 85 90
 Cys Gln Leu Val Ala Asp Pro Cys Ala Ser Asn Pro Cys His His
 95 100 105
 Gly Asn Cys Ser Ser Ser Ser Ser Ser Ser Ser Asp Gly Tyr Leu

00440-03301

110	115	120
Cys Ile Cys Asn Glu Gly Tyr Glu Gly	Pro Asn Cys Glu Gln Ala	
125	130	135
Leu Pro Ser Leu Pro Ala Thr Gly Trp	Thr Glu Ser Met Ala Pro	
140	145	150
Arg Gln Leu Gln Pro Val Pro Ala Thr	Gln Glu Pro Asp Lys Ile	
155	160	165
Leu Pro Arg Ser Gln Ala Thr Val Thr	Leu Pro Thr Trp Gln Pro	
170	175	180
Lys Thr Gly Gln Lys Val Val Glu Met	Lys Trp Asp Gln Val Glu	
185	190	195
Val Ile Pro Asp Ile Ala Cys Gly Asn	Ala Ser Ser Asn Ser Ser	
200	205	210
Ala Gly Gly Arg Leu Val Ser Phe Glu	Val Pro Gln Asn Thr Ser	
215	220	225
Val Lys Ile Arg Gln Asp Ala Thr Ala	Ser Leu Ile Leu Leu Trp	
230	235	240
Lys Val Thr Ala Thr Gly Phe Gln Gln	Cys Ser Leu Ile Asp Gly	
245	250	255
Arg Ser Val Thr Pro Leu Gln Ala Ser	Gly Gly Leu Val Leu Leu	
260	265	270
Glu Glu Met Leu Ala Leu Gly Asn Asn	His Phe Ile Gly Phe Val	
275	280	285
Asn Asp Ser Val Thr Lys Ser Ile Val	Ala Leu Arg Leu Thr Leu	
290	295	300
Val Val Lys Val Ser Thr Cys Val Pro	Gly Glu Ser His Ala Asn	
305	310	315
Asp Leu Glu Cys Ser Gly Lys Gly Lys	Cys Thr Thr Lys Pro Ser	
320	325	330
Glu Ala Thr Phe Ser Cys Thr Cys Glu	Glu Gln Tyr Val Gly Thr	
335	340	345
Phe Cys Glu Glu Tyr Asp Ala Cys Gln	Arg Lys Pro Cys Gln Asn	
350	355	360
Asn Ala Ser Cys Ile Asp Ala Asn Glu	Lys Gln Asp Gly Ser Asn	
365	370	375
Phe Thr Cys Val Cys Leu Pro Gly Tyr	Thr Gly Glu Leu Cys Gln	
380	385	390
Ser Lys Ile Asp Tyr Cys Ile Leu Asp	Pro Cys Arg Asn Gly Ala	
395	400	405

09944403-083004
FOOEBO" EOH4450

Thr Cys Ile Ser	Ser Leu Ser Gly Phe	Thr Cys Gln Cys Pro	Glu
410		415	420
Gly Tyr Phe Gly	Ser Ala Cys Glu Glu	Lys Val Asp Pro Cys	Ala
425		430	435
Ser Ser Pro Cys	Gln Asn Asn Gly Thr	Cys Tyr Val Asp Gly	Val
440		445	450
His Phe Thr Cys	Asn Cys Ser Pro Gly	Phe Thr Gly Pro Thr	Cys
455		460	465
Ala Gln Leu Ile	Asp Phe Cys Ala Leu	Ser Pro Cys Ala His	Gly
470		475	480
Thr Cys Arg Ser	Val Gly Thr Ser Tyr	Lys Cys Leu Cys Asp	Pro
485		490	495
Gly Tyr His Gly	Leu Tyr Cys Glu Glu	Glu Tyr Asn Glu Cys	Leu
500		505	510
Ser Ala Pro Cys	Leu Asn Ala Ala Thr	Cys Arg Asp Leu Val	Asn
515		520	525
Gly Tyr Glu Cys	Val Cys Leu Ala Glu	Tyr Lys Gly Thr His	Cys
530		535	540
Glu Leu Tyr Lys	Asp Pro Cys Ala Asn	Val Ser Cys Leu Asn	Gly
545		550	555
Ala Thr Cys Asp	Ser Asp Gly Leu Asn	Gly Thr Cys Ile Cys	Ala
560		565	570
Pro Gly Phe Thr	Gly Glu Glu Cys Asp	Ile Asp Ile Asn Glu	Cys
575		580	585
Asp Ser Asn Pro	Cys His His Gly Gly	Ser Cys Leu Asp Gln	Pro
590		595	600
Asn Gly Tyr Asn	Cys His Cys Pro His	Gly Trp Val Gly Ala	Asn
605		610	615
Cys Glu Ile His	Leu Gln Trp Lys Ser	Gly His Met Ala Glu	Ser
620		625	630
Leu Thr Asn Met	Pro Arg His Ser Leu	Tyr Ile Ile Ile Gly	Ala
635		640	645
Leu Cys Val Ala	Phe Ile Leu Met Leu	Ile Ile Leu Ile Val	Gly
650		655	660
Ile Cys Arg Ile	Ser Arg Ile Glu Tyr	Gln Gly Ser Ser Arg	Pro
665		670	675
Ala Tyr Glu Glu	Phe Tyr Asn Cys Arg	Ser Ile Asp Ser Glu	Phe
680		685	690
Ser Asn Ala Ile	Ala Ser Ile Arg His	Ala Arg Phe Gly Lys	Lys

695

700

705

Ser Arg Pro Ala Met Tyr Asp Val Ser Pro Ile Ala Tyr Glu Asp
 710 715 720

Tyr Ser Pro Asp Asp Lys Pro Leu Val Thr Leu Ile Lys Thr Lys
 725 730 735

Asp Leu

<210> 16

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 16

tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 17

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 17

caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 18

<211> 508

<212> DNA

<213> Homo Sapien

<400> 18

ctctggaagg tcacggccac aggattccaa cagtgtccc tcatagatgg 50

acgaaagtgt gacccccctt tcaggctttc agggggactg gtcctcctgg 100

aggagatgct cgccttgggg aataatcact ttattggttt tgtgaatgat 150

tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggagaagg 200

cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250

gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttcctgtacc 300

tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350

gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400

aagatgggag caatttcacc tgtgtttgcc ttcctgggta tactggagag 450

ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500

00944403-083001

taggggag 508

<210> 19
<211> 508
<212> DNA
<213> Homo Sapien

<400> 19
ctctggaagg tcacggccac aggattccaa cagtgctccc tcatagatgg 50
acgaaagtgt gacccccctt tcaggctttc aggggggactg gtcctcctgg 100
aggagatgct cgccttgagg aataatcact ttattgggtt tgtgaatgat 150
tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggagaaggt 200
cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250
gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttcctgtacc 300
tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350
gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400
aagatgggag caatttcacc tgtgtttgcc ttcctgggta tactggagag 450
ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500
taggggag 508

<210> 20
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 20
ctctggaagg tcacggccac agg 23

<210> 21
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 21
ctcagttcgg ttggcaaagc tctc 24

<210> 22
<211> 69
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 22

cagtgtctccc tcatagatgg acgaaagtgt gacccccctt tcaggcgaga 50

gctttgccaa ccgaactga 69

<210> 23

<211> 1520

<212> DNA

<213> Homo Sapien

<400> 23

gctgagtctg ctgtctctgc tgtgtgtgt ccagcctgta acctgtgect 50

acaccacgcc agggcccccc agagccctca ccacgctggg cgccccaga 100

gcccacacca tgccggggcac ctacgtctcc tcgaccacac tcagtagtcc 150

cagcaccag ggcttgcaag agcaggcacg ggccctgatg cgggacttcc 200

cgctcgtgga cggccacaac gacctgcccc tggctctaag gcaggtttac 250

cagaaagggc tacaggatgt taacctgcgc aatttcagct acggccagac 300

cagcctggac aggcttagag atggcctcgt gggcgcccag ttctggtcag 350

cctatgtgcc atgccagacc caggaccggg atgcctgcg cctcaccctg 400

gagcagattg acctatacgc ccgcatgtgt gcctcctatt ctgagctgga 450

gcttgtgacc tcggctaaag ctctgaacga cactcagaaa ttggcctgcc 500

tcacgggtgt agaggggtggc cactcgctgg acaatagcct ctccatctta 550

cgtaccttct acatgctggg agtgcgctac ctgacgtca cccacacctg 600

caacacaccc tgggcagaga gctccgctaa gggcgtccac tccttctaca 650

acaacatcag cgggctgact gactttgggt agaaggtggt ggcagaaatg 700

aaccgcctgg gcatgatggt agacttatcc catgtctcag atgctgtggc 750

acggcggggc ctggaagtgt cacaggcacc tgtgatcttc tcccactcgg 800

ctgcccgggg tgtgtgcaac agtgctcgga atgttctga tgacatcctg 850

cagcttctga agaagaacgg tggcgtcgtg atgggtgtctt tgtccatggg 900

agtaatacag tgcaacccat cagccaatgt gtccactgtg gcagatcact 950

tcgaccacat caaggctgtc attggatcca agttcatcgg gattgggtgga 1000

gattatgatg gggccggcaa attccctcag gggctggaag acgtgtccac 1050

ataccgggtc ctgatagagg agttgctgag tcgtggctgg agtgaggaag 1100

agcttcaggg tgccttcgt ggaaacctgc tgcgggtctt cagacaagtg 1150

0944403-083001

06-11-03-0930

<211> 433

<213> Homo Sapien

Met Pro Gly Thr Tyr Ala Pro Ser Thr Thr Leu Ser Ser Pro Ser
1 5 10 15

Thr Gln Gly Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe
20 25 30

Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln
35 40 45

Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser
50 55 60

Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly
65 70 75

Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg
80 85 90

Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg
95 100 105

Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys
110 115 120

Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu
125 130 135

Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe
140 145 150

Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn
155 160 165

Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr
170 175 180

TOPSECRET-083001

<400> 25
agttctgggc agcctatgtg cc 22

<210> 26
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
cgtgatgggtg tctttgtcca tggg 24

<210> 27
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 27
ctccaccaat cccgatgaac ttgg 24

<210> 28
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 28
gagcagattg acctcatagc ccgcattgtg gcctcctatt ctgagctgga 50

<210> 29
<211> 1416
<212> DNA
<213> Homo Sapien

<400> 29
aaaacctata aatattccgg attattcata ccgtcccacc atcgggcgcg 50
gatccgcggc cgccaattct aaaccaacat gccgggcacc tacgctccct 100
cgaccacact cagtagtccc agcaccagg gcctgcaaga gcaggcacgg 150
gccctgatgc gggacttccc gctcgtggac ggccacaacg acctgcccct 200
ggtcctaagg caggtttacc agaaagggt acaggatgtt aacctgcgca 250
atttcagcta cggccagacc agcctggaca ggcttagaga tggcctcgtg 300
ggcgccaggt tctggtcagc ctatgtgcca tgccagaccc aggaccggga 350
tgccctgcgc ctcaccctgg agcagattga cctcatagc cgcattgtgtg 400

09944403-083001

cctcctattc tgagctggag cttgtgacct cggctaaagc tctgaacgac 450
 actcagaaat tggcctgcct catcggtgta gaggggtggcc actcgctgga 500
 caatagcctc tccatcttac gtaccttcta catgctggga gtgcgctacc 550
 tgacgctcac ccacacctgc aacacacctt gggcagagag ctccgctaag 600
 ggcgtccact ccttctacaa caacatcagc gggctgactg acttttgtga 650
 gaaggtggtg gcagaaatga accgcctggg catgatggta gacttatccc 700
 atgtctcaga tgctgtggca cggcgggccc tggaagtgtc acaggcacct 750
 gtgatcttct cccactcggc tgcccggggg gtgtgcaaca gtgctcggaa 800
 tgttctgat gacatcctgc agcttctgaa gaagaacggg ggcgtcgtga 850
 tgggtgtcttt gtccatggga gtaatacagt gcaacccatc agccaatgtg 900
 tccactgtgg cagatcactt cgaccacatc aaggctgtca ttggatccaa 950
 gttcatcggg attggtggag attatgatgg ggccggcaaa ttcctcagg 1000
 ggctggaaga cgtgtccaca tacccggtcc tgatagagga gttgctgagt 1050
 cgtggctgga gtgaggaaga gcttcagggt gtccttcgtg gaaacctgct 1100
 gcgggtcttc agacaagtgg aaaagggtaca ggaagaaaac aaatggcaaa 1150
 gcccccttga ggacaagtgc ccggatgagc agctgagcag ttcctgccac 1200
 tccgacctct cactctgcg tcagagacag agtctgactt caggccagga 1250
 actcactgag attcccatc actggacagc caagttacca gccaaagtgg 1300
 cagtctcaga gtccctcccc caccctgaca aaactcacac atgcccaccg 1350
 tgcccagcac ctgaactcct gggggggaccg tcagtcttcc tcttcccccc 1400
 aaaacccaag gacacc 1416

<210> 30

<211> 446

<212> PRT

<213> Homo Sapien

<400> 30

Met	Pro	Gly	Thr	Tyr	Ala	Pro	Ser	Thr	Thr	Leu	Ser	Ser	Pro	Ser
1				5					10					15
Thr	Gln	Gly	Leu	Gln	Glu	Gln	Ala	Arg	Ala	Leu	Met	Arg	Asp	Phe
				20					25					30
Pro	Leu	Val	Asp	Gly	His	Asn	Asp	Leu	Pro	Leu	Val	Leu	Arg	Gln
				35					40					45
Val	Tyr	Gln	Lys	Gly	Leu	Gln	Asp	Val	Asn	Leu	Arg	Asn	Phe	Ser

				50					55					60
Tyr	Gly	Gln	Thr	Ser 65	Leu	Asp	Arg	Leu	Arg 70	Asp	Gly	Leu	Val	Gly 75
Ala	Gln	Phe	Trp	Ser 80	Ala	Tyr	Val	Pro	Cys 85	Gln	Thr	Gln	Asp	Arg 90
Asp	Ala	Leu	Arg	Leu 95	Thr	Leu	Glu	Gln	Ile 100	Asp	Leu	Ile	Arg	Arg 105
Met	Cys	Ala	Ser	Tyr 110	Ser	Glu	Leu	Glu	Leu 115	Val	Thr	Ser	Ala	Lys 120
Ala	Leu	Asn	Asp	Thr 125	Gln	Lys	Leu	Ala	Cys 130	Leu	Ile	Gly	Val	Glu 135
Gly	Gly	His	Ser	Leu 140	Asp	Asn	Ser	Leu	Ser 145	Ile	Leu	Arg	Thr	Phe 150
Tyr	Met	Leu	Gly	Val 155	Arg	Tyr	Leu	Thr	Leu 160	Thr	His	Thr	Cys	Asn 165
Thr	Pro	Trp	Ala	Glu 170	Ser	Ser	Ala	Lys	Gly 175	Val	His	Ser	Phe	Tyr 180
Asn	Asn	Ile	Ser	Gly 185	Leu	Thr	Asp	Phe	Gly 190	Glu	Lys	Val	Val	Ala 195
Glu	Met	Asn	Arg	Leu 200	Gly	Met	Met	Val	Asp 205	Leu	Ser	His	Val	Ser 210
Asp	Ala	Val	Ala	Arg 215	Arg	Ala	Leu	Glu	Val 220	Ser	Gln	Ala	Pro	Val 225
Ile	Phe	Ser	His	Ser 230	Ala	Ala	Arg	Gly	Val 235	Cys	Asn	Ser	Ala	Arg 240
Asn	Val	Pro	Asp	Asp 245	Ile	Leu	Gln	Leu	Leu 250	Lys	Lys	Asn	Gly	Gly 255
Val	Val	Met	Val	Ser 260	Leu	Ser	Met	Gly	Val 265	Ile	Gln	Cys	Asn	Pro 270
Ser	Ala	Asn	Val	Ser 275	Thr	Val	Ala	Asp	His 280	Phe	Asp	His	Ile	Lys 285
Ala	Val	Ile	Gly	Ser 290	Lys	Phe	Ile	Gly	Ile 295	Gly	Gly	Asp	Tyr	Asp 300
Gly	Ala	Gly	Lys	Phe 305	Pro	Gln	Gly	Leu	Glu 310	Asp	Val	Ser	Thr	Tyr 315
Pro	Val	Leu	Ile	Glu 320	Glu	Leu	Leu	Ser	Arg 325	Gly	Trp	Ser	Glu	Glu 330
Glu	Leu	Gln	Gly	Val 335	Leu	Arg	Gly	Asn	Leu 340	Leu	Arg	Val	Phe	Arg 345

Gln	Val	Glu	Lys	Val	Gln	Glu	Glu	Asn	Lys	Trp	Gln	Ser	Pro	Leu
				350					355					360
Glu	Asp	Lys	Phe	Pro	Asp	Glu	Gln	Leu	Ser	Ser	Ser	Cys	His	Ser
				365					370					375
Asp	Leu	Ser	Arg	Leu	Arg	Gln	Arg	Gln	Ser	Leu	Thr	Ser	Gly	Gln
				380					385					390
Glu	Leu	Thr	Glu	Ile	Pro	Ile	His	Trp	Thr	Ala	Lys	Leu	Pro	Ala
				395					400					405
Lys	Trp	Ser	Val	Ser	Glu	Ser	Ser	Pro	His	Pro	Asp	Lys	Thr	His
				410					415					420
Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser
				425					430					435
Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr				
				440					445					

<210> 31
 <211> 1790
 <212> DNA
 <213> Homo Sapien

<400> 31
 cgcccagcga cgtgcgggcg gcctggcccg cgccctcccg cgcccggcct 50
 gcgtcccgcg ccttgcgcca ccgccgccga gccgcagccc gccgcgcgcc 100
 cccggcagcg ccggccccat gcccgccggc cgccggggcc ccgccgcca 150
 atccgcgcgg cggccgccgc cgttgctgcc cctgctgctg ctgctctgcg 200
 tcctcggggc gccgcgagcc ggatcaggag ccacacagc tgtgatcagt 250
 ccccaggatc ccacgcttct catcggtcc tccctgctgg ccacctgctc 300
 agtgcacgga gaccaccag gagccaccgc cgagggcctc tactggaccc 350
 tcaacgggcg ccgcctgccc cctgagctct cccgtgtact caacgcctcc 400
 accttggtc tggccctggc caacctcaat ggggtccaggc agcggtcggg 450
 ggacaacctc gtgtgccacg cccgtgacgg cagcatcctg gctggctcct 500
 gcctctatgt tggcctgccc ccagagaaac ccgtcaacat cagctgctgg 550
 tccaagaaca tgaaggactt gacctgccgc tggacgccag gggccacgg 600
 ggagaccttc ctccacacca actactccct caagtacaag cttaggtggg 650
 atggccagga caacacatgt gaggagtacc acacagtggg gcccactcc 700
 tgccacatcc ccaaggacct ggctctcttt acgccctatg agatctgggt 750
 ggaggccacc aaccgcctgg gctctgcccg ctccgatgta ctcacgctgg 800

09944403-083001

atatactgga tgtggtgacc acggaccccc cgcccacgt gcacgtgagc 850
 cgcgtcgggg gcctggagga ccagctgagc gtgcgctggg tgcgccacc 900
 cgcctcaag gatttctct ttcaagccaa ataccagatc cgctaccgag 950
 tggaggacag tgtggactgg aagggtggtg acgatgtgag caaccagacc 1000
 tcctgcccgc tggccggcct gaaacccggc accgtgtact tcgtgcaagt 1050
 gcgctgcaac ccccttgga tctatggctc caagaaagcc gggatctgga 1100
 gtgagtggag ccaccccaca gccgcctcca ctccccgag tgagcgcccg 1150
 ggcccgggcg gcggggcggtg cgaaccgcgg ggcggagagc cgagctcggg 1200
 gccggtgcgg cgcgagctca agcagttcct gggctggctc aagaagcacg 1250
 cgtactgtc caacctcagc ttccgcctct acgaccagtg gcgagcctgg 1300
 atgcagaagt cgcacaagac ccgcaaccag gacgagggga tcctgccctc 1350
 gggcagacgg ggcacggcga gaggtcctgc cagataagct gtaggggctc 1400
 aggccaccct ccctgccacg tggagacgca gaggccgaac ccaaactggg 1450
 gccacctctg taccctcact tcagggcacc tgagccaccc tcagcaggag 1500
 ctgggggtggc ccctgagctc caacggccat aacagctctg actcccacgt 1550
 gaggccacct ttgggtgcac cccagtgggt gtgtgtgtgt gtgtgaggg 1600
 tggttgagtt gcctagaacc cctgccaggg ctgggggtga gaaggggagt 1650
 cattactccc cattacctag ggcccctcca aaagagtcct tttaaataaa 1700
 tgagctattt aggtgctgtg attgtgaaaa aaaaaaaaaa aaaaaaaaaa 1750
 aaaaaaaaaa aaaaaaaaaa aaaaacaaaa aaaaaaaaaa 1790

<210> 32
 <211> 422
 <212> PRT
 <213> Homo Sapien

<400> 32
 Met Pro Ala Gly Arg Arg Gly Pro Ala Ala Gln Ser Ala Arg Arg
 1 5 10 15
 Pro Pro Pro Leu Leu Pro Leu Leu Leu Leu Cys Val Leu Gly
 20 25 30
 Ala Pro Arg Ala Gly Ser Gly Ala His Thr Ala Val Ile Ser Pro
 35 40 45
 Gln Asp Pro Thr Leu Leu Ile Gly Ser Ser Leu Leu Ala Thr Cys
 50 55 60

	350		355		360									
Gly	Pro	Val	Arg	Arg	Glu	Leu	Lys	Gln	Phe	Leu	Gly	Trp	Leu	Lys
				365					370					375
Lys	His	Ala	Tyr	Cys	Ser	Asn	Leu	Ser	Phe	Arg	Leu	Tyr	Asp	Gln
				380					385					390
Trp	Arg	Ala	Trp	Met	Gln	Lys	Ser	His	Lys	Thr	Arg	Asn	Gln	Asp
				395					400					405
Glu	Gly	Ile	Leu	Pro	Ser	Gly	Arg	Arg	Gly	Thr	Ala	Arg	Gly	Pro
				410					415					420

Ala Arg

<210> 33
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 33
 cccgcccgcac gtgcacgtga gcc 23

<210> 34
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 34
 tgagccagcc caggaactgc ttg 23

<210> 35
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 35
 caagtgcgct gcaaccctt tggcatctat ggctccaaga aagccgggat 50

<210> 36
 <211> 1771
 <212> DNA
 <213> Homo Sapien

<400> 36
 cccacgcgtc cgctgggtgtt agatcgagca accctctaaa agcagtttag 50

agtggtaaaa aaaaaaaaaa acacacccaaa cgctcgcagc cacaaaagg 100
 atgaaatttc ttctggacat cctcctgctt ctcccgttac tgategtctg 150
 ctccctagag tccttcgtga agctttttat tcctaagagg agaaaatcag 200
 tcaccggcga aatcgtgctg attacaggag ctgggcacatg aattgggaga 250
 ctgactgect atgaatttgc taaactttaa agcaagctgg ttctctggga 300
 tataaataag catggactgg aggaaacagc tgccaaatgc aagggactgg 350
 gtgccaaggt tcataccttt gtggtagact gcagcaaccg agaagatatt 400
 tacagctctg caaagaaggt gaaggcagaa attggagatg ttagtatttt 450
 agtaaataat gctggtgtag tctatacatc agatttggtt gctacacaag 500
 atcctcagat tgaaaagact tttgaagtta atgtacttgc acatttctgg 550
 actacaaagg catttcttcc tgcaatgacg aagaataacc atggccatat 600
 tgtcactgtg gcttcggcag ctggacatgt ctcggtcccc ttcttactgg 650
 cttactgttc aagcaagttt gctgctgttg gatttcataa aactttgaca 700
 gatgaactgg ctgccttaca aataactgga gtcaaaacaa catgtctgtg 750
 tcctaatttc gtaaacactg gcttcatcaa aaatccaagt acaagtttgg 800
 gaccactctt ggaacctgag gaagtggtaa acaggctgat gcatgggatt 850
 ctgactgagc agaagatgat ttttattcca tcttctatag cttttttaac 900
 aacattggaa aggatccttc ctgagcggtt cctggcagtt ttaaaacgaa 950
 aaatcagtg taaagtttgat gcagttattg gatataaaat gaaagcgcaa 1000
 taagcaccta gttttctgaa aactgattta ccaggtttag gttgatgtca 1050
 tctaatagtg ccagaatttt aatgtttgaa cttctgtttt ttctaattat 1100
 cccatttct tcaatatcat ttttgaggct ttggcagttc tcatttacta 1150
 ccacttggtc tttagccaaa agctgattac atatgatata aacagagaaa 1200
 tacctttaga ggtgacttta aggaaaatga agaaaaagaa ccaaaatgac 1250
 tttattaaaa taatttccaa gattatttgt ggctcacctg aaggctttgc 1300
 aaaatttgta ccataaccgt ttatttaaca tatattttta tttttgattg 1350
 cacttaaatt ttgtataatt tgtgtttctt tttctgttct acataaaatc 1400
 agaaacttca agctctctaa ataaaatgaa ggactatatc tagtggtatt 1450
 tcacaatgaa tatcatgaac tctcaatggg taggtttcat cctaccatt 1500

200										205					210				
Val	Lys	Thr	Thr	Cys	Leu	Cys	Pro	Asn	Phe	Val	Asn	Thr	Gly	Phe					
215										220					225				
Ile	Lys	Asn	Pro	Ser	Thr	Ser	Leu	Gly	Pro	Thr	Leu	Glu	Pro	Glu					
230										235					240				
Glu	Val	Val	Asn	Arg	Leu	Met	His	Gly	Ile	Leu	Thr	Glu	Gln	Lys					
245										250					255				
Met	Ile	Phe	Ile	Pro	Ser	Ser	Ile	Ala	Phe	Leu	Thr	Thr	Leu	Glu					
260										265					270				
Arg	Ile	Leu	Pro	Glu	Arg	Phe	Leu	Ala	Val	Leu	Lys	Arg	Lys	Ile					
275										280					285				
Ser	Val	Lys	Phe	Asp	Ala	Val	Ile	Gly	Tyr	Lys	Met	Lys	Ala	Gln					
290										295					300				

<210> 38
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 38
 ggtgaaggca gaaattggag atg 23

<210> 39
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 39
 atcccatgca tcagcctggt tacc 24

<210> 40
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 40
 gctggtgtag tctatacatc agatttggtt gctacacaag atcctcag 48

<210> 41
 <211> 1377
 <212> DNA
 <213> Homo Sapien

<400> 41

gactagttct cttggagtct gggaggagga aagcggagcc ggcagggagc 50
gaaccaggac tgggggtgacg gcagggcagg gggcgcttg ccggggagaa 100
gcgcgggggc tggagcacca ccaactggag ggtccggagt agcgagcgcc 150
ccgaaggagg ccatcgggga gccgggaggg gggactgca gaggaccccg 200
gcgtccgggc tcccggtgcc agcgctatga ggccactcct cgtcctgctg 250
ctcctggggc tggcgccgg ctcgccccca ctggacgaca acaagatccc 300
cagcctctgc ccggggcacc ccggccttcc aggcacgccg ggccaccatg 350
gcagccaggg cttgccgggc cgcgatggcc gcgacggccg cgacggcgcg 400
cccggggctc cgggagagaa aggcgagggc gggaggccgg gactgccggg 450
acctcgaggg gaccccgggc cgcgaggaga ggcgggaccc gcggggccca 500
ccgggcctgc cggggagtgc tcggtgcctc cgcgatccgc cttcagcgcc 550
aagcgctccg agagccgggt gcctccgccg tctgacgcac ccttgccctt 600
cgaccgcgtg ctggtgaacg agcagggaca ttacgacgcc gtcaccggca 650
agtccacctg ccagggtgcct ggggtctact acttcgccgt ccatgccacc 700
gtctaccggg ccagcctgca gtttgatctg gtgaagaatg gcgaatccat 750
tgctcttttc ttccagtttt tcgggggggtg gcccagcca gcctcgctct 800
cggggggggc catggtgagg ctggagcctg aggaccaagt gtgggtgcag 850
gtgggtgtgg gtgactacat tggcatctat gccagcatca agacagacag 900
caccttctcc ggatttctgg tgtactccga ctggcacagc tcccagctct 950
ttgcttagtg cccactgcaa agtgagctca tgctctcact cctagaagga 1000
gggtgtgagg ctgacaacca ggtcatccag gagggctggc cccctggaa 1050
tattgtgaat gactagggag gtggggtaga gcactctccg tcctgctgct 1100
ggcaaggaat gggaacagtg gctgtctgcg atcaggtctg gcagcatggg 1150
gcagtggctg gatctctgcc caagaccaga ggagtgtgct gtgctggcaa 1200
gtgtaagtcc ccagttgct ctggtccagg agcccacggg ggggtgctct 1250
cttctgggc ctctgcttct ctggatcctc cccacccct cctgctcctg 1300
gggcggggc ttttctcaga gatcactcaa taaacctaag aaccctcata 1350
aaaaaaaaa aaaaaaaaaa aaaaaaa 1377

<210> 42

<211> 243
 <212> PRT
 <213> Homo Sapien

<400> 42

Met	Arg	Pro	Leu	Leu	Val	Leu	Leu	Leu	Leu	Gly	Leu	Ala	Ala	Gly	1	5	10	15
Ser	Pro	Pro	Leu	Asp	Asp	Asn	Lys	Ile	Pro	Ser	Leu	Cys	Pro	Gly	20	25	30	
His	Pro	Gly	Leu	Pro	Gly	Thr	Pro	Gly	His	His	Gly	Ser	Gln	Gly	35	40	45	
Leu	Pro	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Ala	Pro	Gly	50	55	60	
Ala	Pro	Gly	Glu	Lys	Gly	Glu	Gly	Gly	Arg	Pro	Gly	Leu	Pro	Gly	65	70	75	
Pro	Arg	Gly	Asp	Pro	Gly	Pro	Arg	Gly	Glu	Ala	Gly	Pro	Ala	Gly	80	85	90	
Pro	Thr	Gly	Pro	Ala	Gly	Glu	Cys	Ser	Val	Pro	Pro	Arg	Ser	Ala	95	100	105	
Phe	Ser	Ala	Lys	Arg	Ser	Glu	Ser	Arg	Val	Pro	Pro	Pro	Ser	Asp	110	115	120	
Ala	Pro	Leu	Pro	Phe	Asp	Arg	Val	Leu	Val	Asn	Glu	Gln	Gly	His	125	130	135	
Tyr	Asp	Ala	Val	Thr	Gly	Lys	Phe	Thr	Cys	Gln	Val	Pro	Gly	Val	140	145	150	
Tyr	Tyr	Phe	Ala	Val	His	Ala	Thr	Val	Tyr	Arg	Ala	Ser	Leu	Gln	155	160	165	
Phe	Asp	Leu	Val	Lys	Asn	Gly	Glu	Ser	Ile	Ala	Ser	Phe	Phe	Gln	170	175	180	
Phe	Phe	Gly	Gly	Trp	Pro	Lys	Pro	Ala	Ser	Leu	Ser	Gly	Gly	Ala	185	190	195	
Met	Val	Arg	Leu	Glu	Pro	Glu	Asp	Gln	Val	Trp	Val	Gln	Val	Gly	200	205	210	
Val	Gly	Asp	Tyr	Ile	Gly	Ile	Tyr	Ala	Ser	Ile	Lys	Thr	Asp	Ser	215	220	225	
Thr	Phe	Ser	Gly	Phe	Leu	Val	Tyr	Ser	Asp	Trp	His	Ser	Ser	Pro	230	235	240	
Val	Phe	Ala																

<210> 43
 <211> 24

0944403-083001

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 43
tacaggccca gtcaggacca gggg 24

<210> 44
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 44
agccagcctc gctctcgg 18

<210> 45
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 45
gtctgcgatc aggtctgg 18

<210> 46
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 46
gaaagaggca atggattcgc 20

<210> 47
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 47
gacttacact tgccagcaca gcac 24

<210> 48
<211> 45
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 48

ggagcaccac caactggagg gtccggagta gcgagcgccc cgaag 45

<210> 49

<211> 1876

<212> DNA

<213> Homo Sapien

<400> 49

ctcttttgtc caccagccca gctgactcc tggagattgt gaatagctcc 50

atccagcctg agaaacaagc cgggtggctg agccaggctg tgcacggagc 100

acctgacggg cccaacagac ccatgctgca tccagagacc tcccctggcc 150

gggggcatct cctggctgtg ctcttgccc tccttggcac cacctgggca 200

gaggtgtggc caccacagct gcaggagcag gctccgatgg ccggagccct 250

gaacaggaag gagagtttct tgctcctctc cctgcacaac cgctgcgca 300

gctgggtcca gccccctgcg gctgacatgc ggaggctgga ctggagtgc 350

agcctggccc aactggetca agccaggga gccctctgtg gaatcccaac 400

cccgagcctg gcatccggcc tgtggcgcac cctgcaagtg ggctggaaca 450

tgcagctgct gcccgcgggc ttggcgctct ttgttgaagt ggtcagccta 500

tggtttgtag aggggtagcg gtacagccac gcggcaggag agtgtgctcg 550

caacgccacc tgcacccact acacgcagct cgtgtgggcc acctcaagcc 600

agctgggctg tgggcggcac ctgtgctctg caggccagac agcgatagaa 650

gcctttgtct gtgcctactc ccccgaggc aactgggagg tcaacgggaa 700

gacaatcatc ccctataaga agggtgctg gtgttcgctc tgcacagcca 750

gtgtctcagg ctgcttcaaa gcctgggacc atgcaggggg gctctgtgag 800

gtccccagga atccttgctg catgagctgc cagaaccatg gacgtctcaa 850

catcagcacc tgccactgcc actgtcccc tggctacacg ggcagatact 900

gccaagtgcg gtgcagcctg cagtgtgtgc acggccggtt ccgggaggag 950

gagtgtcgt gcgtctgtga catcggctac gggggagccc agtgtgccac 1000

caaggtgcat tttcccttcc acacctgtga cctgaggatc gacggagact 1050

gcttcatggg gtcttcagag gcagacacct attacagagc caggatgaaa 1100

tgtcagagga aaggcggggg gctggcccag atcaagagcc agaaagtgc 1150

094443.08304

ggacatcttc gccttctatc tgggccgcct ggagaccacc aacgaggtga 1200
 ctgacagtga cttcgagacc aggaacttct ggatcgggct cacctacaag 1250
 accgccaagg actccttccg ctgggccaca ggggagcacc aggccttcac 1300
 cagttttgcc tttgggcagc ctgacaacca cgggctgggtg tggctgagtg 1350
 ctgccatggg gtttggcaac tgcgtggagc tgcaggcttc agctgccttc 1400
 aactggaacg accagcgctg caaaaccga aaccgttaca tctgccagtt 1450
 tgcccaggag cacatctccc ggtggggccc agggctctga ggctgacca 1500
 catggctccc tcgctgccc tgggagcacc ggctctgctt acctgtctgc 1550
 ccacctgtct ggaacaaggg ccagggttaag accacatgcc tcatgtccaa 1600
 agaggtctca gaccttgac aatgccagaa gttgggcaga gagaggcagg 1650
 gaggccagtg agggccaggg agtgagtgtt agaagaagct ggggcccttc 1700
 gcctgctttt gattgggaag atgggcttca attagatggc gaaggagagg 1750
 acaccgccag tgggtcaaaa aggtctgctct cttccacctg gccagaccc 1800
 tgtggggcag cggagcttcc ctgtggcatg aacccacgg ggtattaaat 1850
 tatgaatcag ctgaaaaaaaa aaaaaa 1876

<210> 50
 <211> 455
 <212> PRT
 <213> Homo Sapien

<400> 50
 Met Leu His Pro Glu Thr Ser Pro Gly Arg Gly His Leu Leu Ala
 1 5 10 15
 Val Leu Leu Ala Leu Leu Gly Thr Thr Trp Ala Glu Val Trp Pro
 20 25 30
 Pro Gln Leu Gln Glu Gln Ala Pro Met Ala Gly Ala Leu Asn Arg
 35 40 45
 Lys Glu Ser Phe Leu Leu Leu Ser Leu His Asn Arg Leu Arg Ser
 50 55 60
 Trp Val Gln Pro Pro Ala Ala Asp Met Arg Arg Leu Asp Trp Ser
 65 70 75
 Asp Ser Leu Ala Gln Leu Ala Gln Ala Arg Ala Ala Leu Cys Gly
 80 85 90
 Ile Pro Thr Pro Ser Leu Ala Ser Gly Leu Trp Arg Thr Leu Gln
 95 100 105
 Val Gly Trp Asn Met Gln Leu Leu Pro Ala Gly Leu Ala Ser Phe

				110					115					120	
Val	Glu	Val	Val	Ser 125	Leu	Trp	Phe	Ala	Glu 130	Gly	Gln	Arg	Tyr	Ser 135	
His	Ala	Ala	Gly	Glu 140	Cys	Ala	Arg	Asn	Ala 145	Thr	Cys	Thr	His	Tyr 150	
Thr	Gln	Leu	Val	Trp 155	Ala	Thr	Ser	Ser	Gln 160	Leu	Gly	Cys	Gly	Arg 165	
His	Leu	Cys	Ser	Ala 170	Gly	Gln	Thr	Ala	Ile 175	Glu	Ala	Phe	Val	Cys 180	
Ala	Tyr	Ser	Pro	Gly 185	Gly	Asn	Trp	Glu	Val 190	Asn	Gly	Lys	Thr	Ile 195	
Ile	Pro	Tyr	Lys	Lys 200	Gly	Ala	Trp	Cys	Ser 205	Leu	Cys	Thr	Ala	Ser 210	
Val	Ser	Gly	Cys	Phe 215	Lys	Ala	Trp	Asp	His 220	Ala	Gly	Gly	Leu	Cys 225	
Glu	Val	Pro	Arg	Asn 230	Pro	Cys	Arg	Met	Ser 235	Cys	Gln	Asn	His	Gly 240	
Arg	Leu	Asn	Ile	Ser 245	Thr	Cys	His	Cys	His 250	Cys	Pro	Pro	Gly	Tyr 255	
Thr	Gly	Arg	Tyr	Cys 260	Gln	Val	Arg	Cys	Ser 265	Leu	Gln	Cys	Val	His 270	
Gly	Arg	Phe	Arg	Glu 275	Glu	Glu	Cys	Ser	Cys 280	Val	Cys	Asp	Ile	Gly 285	
Tyr	Gly	Gly	Ala	Gln 290	Cys	Ala	Thr	Lys	Val 295	His	Phe	Pro	Phe	His 300	
Thr	Cys	Asp	Leu	Arg 305	Ile	Asp	Gly	Asp	Cys 310	Phe	Met	Val	Ser	Ser 315	
Glu	Ala	Asp	Thr	Tyr 320	Tyr	Arg	Ala	Arg	Met 325	Lys	Cys	Gln	Arg	Lys 330	
Gly	Gly	Val	Leu	Ala 335	Gln	Ile	Lys	Ser	Gln 340	Lys	Val	Gln	Asp	Ile 345	
Leu	Ala	Phe	Tyr	Leu 350	Gly	Arg	Leu	Glu	Thr 355	Thr	Asn	Glu	Val	Thr 360	
Asp	Ser	Asp	Phe	Glu 365	Thr	Arg	Asn	Phe	Trp 370	Ile	Gly	Leu	Thr	Tyr 375	
Lys	Thr	Ala	Lys	Asp 380	Ser	Phe	Arg	Trp	Ala 385	Thr	Gly	Glu	His	Gln 390	
Ala	Phe	Thr	Ser	Phe 395	Ala	Phe	Gly	Gln	Pro 400	Asp	Asn	His	Gly	Leu 405	

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu
410 415 420

Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr
425 430 435

Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg
440 445 450

Trp Gly Pro Gly Ser
455

<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 51
aggaacttct ggatcgggct cacc 24

<210> 52
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 52
gggtctgggc caggtggaag agag 24

<210> 53
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 53
gccaaggact ccttccgctg ggccacaggg gagcaccagg ccttc 45

<210> 54
<211> 2331
<212> DNA
<213> Homo Sapien

<400> 54
cggacgcgtg ggctgggctg tgcaaagcgt gtcccgccgg gtccccgagc 50
gtccgcgcc ctcgccccgc catgctctg ctgctggggc tgtgctggg 100
gctgtccctg tgtgtggggt cgcaggaaga ggcgcagagc tggggccact 150
cttcggagca ggatggactc aggggtccga ggcaagtcag actgttgag 200

aggctgaaaa ccaaaccctt gatgacagaa ttctcagtga agtctacat 250
 catttcccgt tatgccttca ctacggtttc ctgcagaatg ctgaacagag 300
 cttctgaaga ccaggacatt gagttccaga tgcagattcc agctgcagct 350
 ttcatcacca acttcactat gcttattgga gacaagggtgt atcagggcga 400
 aattacagag agagaaaaga agagtgggtga tagggtaaaa gagaaaagga 450
 ataaaaccac agaagaaaat ggagagaagg ggactgaaat attcagagct 500
 tctgcagtga ttcccagcaa ggacaaagcc gcctttttcc tgagttatga 550
 ggagcttctg cagaggcgcc tgggcaagta cgagcacagc atcagcgtgc 600
 ggccccagca gctgtccggg aggctgagcg tggacgtgaa tatectggag 650
 agcgcgggca tgcacccct ggaggtgctg ccgcttcaca acagcaggca 700
 gaggggcagt gggcgcgggg aagatgattc tgggcctccc ccatctactg 750
 tcattaacca aaatgaaaca ttgccaaca taatttttaa acctactgta 800
 gtacaacaag ccaggattgc ccagaatgga attttgggag actttatcat 850
 tagatatgac gtcaatagag aacagagcat tggggacatc caggttctaa 900
 atggctatth tgtgcactac ttgtctcta aagaccttcc tectttaccc 950
 aagaatgtgg tattcgtgct tgacagcagt gcttctatgg tgggaaccaa 1000
 actccggcag accaaggatg ccctcttcac aattctccat gacctccgac 1050
 cccaggaccg tttcagtatc attggatttt ccaaccggat caaagtatgg 1100
 aaggaccact tgatatcagt cactccagac agcatcaggg atgggaaagt 1150
 gtacattcac catatgtcac ccactggagg cacagacatc aacggggccc 1200
 tgcagagggc catcaggctc ctcaacaagt acgtggccca cagtggcatt 1250
 ggagaccgga gcgtgtccct catcgtcttc ctgacggatg ggaagcccac 1300
 ggtcggggag acgcacaccc tcaagatcct caacaacacc cgagaggccg 1350
 cccgaggcca agtctgcac ttaccattg gcatcggcaa cgacgtggac 1400
 ttcaggctgc tggagaaact gtcgctggag aactgtggcc tcacacggcg 1450
 cgtgcacgag gaggaggacg caggctcgca gctcatcggg ttctacgatg 1500
 aaatcaggac cccgctctc tctgacatcc gcatcgatta tccccccagc 1550
 tcagtggctg aggccaccaa gacctgttc cccaactact tcaacggctc 1600
 ggagatcatc attgcgggga agctgggtga caggaagctg gatcacctgc 1650

acgtggaggt caccgccagc aacagtaaga aattcatcat cctgaagaca 1700
gatgtgcctg tgcggcctca gaaggcaggg aaagatgtca caggaagccc 1750
caggcctgga ggcgatggag agggggacac caaccacatc gagcgtctct 1800
ggagctacct caccacaaag gagctgctga gtccttggt gcaaagtac 1850
gatgaaccgg agaaggagcg gctgcggcag cgggcccagg ccctggctgt 1900
gagctaccgc ttctcactc ccttcacctc catgaagctg agggggccgg 1950
tcccacgcat ggatggcctg gaggaggccc acggcatgtc ggctgccatg 2000
ggaccgaac cggtggtgca gagcgtgca ggagctggca cgcagccagg 2050
acctttgctc aagaagccaa actccgtcaa aaaaaaaca aacaaaaca 2100
aaaaaagaca tgggagagat ggtgtttttc ctctccacca cctggggata 2150
cgatgagaag atggccacct gcaagccagg aagacggccc tcaccagaca 2200
ccatgtctgc tggcaccttg atcttgacc tccagcctc cagaactgtg 2250
agaaataaat gtgttttgtt taagctaaaa aaaaaaaaaa aaaaaaaaaa 2300
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2331

<210> 55
<211> 694
<212> PRT
<213> Homo Sapien

<400> 55
Met Leu Leu Leu Leu Gly Leu Cys Leu Gly Leu Ser Leu Cys Val
1 5 10 15
Gly Ser Gln Glu Glu Ala Gln Ser Trp Gly His Ser Ser Glu Gln
20 25 30
Asp Gly Leu Arg Val Pro Arg Gln Val Arg Leu Leu Gln Arg Leu
35 40 45
Lys Thr Lys Pro Leu Met Thr Glu Phe Ser Val Lys Ser Thr Ile
50 55 60
Ile Ser Arg Tyr Ala Phe Thr Thr Val Ser Cys Arg Met Leu Asn
65 70 75
Arg Ala Ser Glu Asp Gln Asp Ile Glu Phe Gln Met Gln Ile Pro
80 85 90
Ala Ala Ala Phe Ile Thr Asn Phe Thr Met Leu Ile Gly Asp Lys
95 100 105
Val Tyr Gln Gly Glu Ile Thr Glu Arg Glu Lys Lys Ser Gly Asp
110 115 120

0944403-083001

410	415	420
Asn Asn Thr Arg Glu Ala Ala Arg Gly Gln Val Cys Ile Phe Thr		
425	430	435
Ile Gly Ile Gly Asn Asp Val Asp Phe Arg Leu Leu Glu Lys Leu		
440	445	450
Ser Leu Glu Asn Cys Gly Leu Thr Arg Arg Val His Glu Glu Glu		
455	460	465
Asp Ala Gly Ser Gln Leu Ile Gly Phe Tyr Asp Glu Ile Arg Thr		
470	475	480
Pro Leu Leu Ser Asp Ile Arg Ile Asp Tyr Pro Pro Ser Ser Val		
485	490	495
Val Gln Ala Thr Lys Thr Leu Phe Pro Asn Tyr Phe Asn Gly Ser		
500	505	510
Glu Ile Ile Ile Ala Gly Lys Leu Val Asp Arg Lys Leu Asp His		
515	520	525
Leu His Val Glu Val Thr Ala Ser Asn Ser Lys Lys Phe Ile Ile		
530	535	540
Leu Lys Thr Asp Val Pro Val Arg Pro Gln Lys Ala Gly Lys Asp		
545	550	555
Val Thr Gly Ser Pro Arg Pro Gly Gly Asp Gly Glu Gly Asp Thr		
560	565	570
Asn His Ile Glu Arg Leu Trp Ser Tyr Leu Thr Thr Lys Glu Leu		
575	580	585
Leu Ser Ser Trp Leu Gln Ser Asp Asp Glu Pro Glu Lys Glu Arg		
590	595	600
Leu Arg Gln Arg Ala Gln Ala Leu Ala Val Ser Tyr Arg Phe Leu		
605	610	615
Thr Pro Phe Thr Ser Met Lys Leu Arg Gly Pro Val Pro Arg Met		
620	625	630
Asp Gly Leu Glu Glu Ala His Gly Met Ser Ala Ala Met Gly Pro		
635	640	645
Glu Pro Val Val Gln Ser Val Arg Gly Ala Gly Thr Gln Pro Gly		
650	655	660
Pro Leu Leu Lys Lys Pro Asn Ser Val Lys Lys Lys Gln Asn Lys		
665	670	675
Thr Lys Lys Arg His Gly Arg Asp Gly Val Phe Pro Leu His His		
680	685	690
Leu Gly Ile Arg		

<210> 56
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 56
gtgggaacca aactccggca gacc 24

<210> 57
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 57
cacatcgagc gtctctgg 18

<210> 58
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 58
agccgctcct tctccggttc atcg 24

<210> 59
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 59
tggaaggacc acttgatatc agtcactcca gacagcatca gggatggg 48

<210> 60
<211> 1413
<212> DNA
<213> Homo Sapien

<400> 60
cggacgcgtg ggggtgcccga catggcgagt gtagtgctgc cgagcggatc 50
ccagtgtgcg gcggcagcgg cggcggcggc gcctcccggg ctccggcttc 100
tgctgttgct cttctccgcc gcggcactga tccccacagg tgatgggcag 150
aatctgttta cgaaagacgt gacagtgatc gagggagagg ttgcgaccat 200

09944403-083001

cagttgccaa gtcaataaga gtgacgactc tgtgattcag ctactgaatc 250
 ccaacaggca gaccatttat ttcaggaggact tcaggccttt gaaggacagc 300
 aggttttcagt tgctgaattt ttctagcagt gaactcaaag tatcattgac 350
 aaacgtctca atttctgatg aaggaagata cttttgccag ctctataccg 400
 atccccacaca ggaaagttac accaccatca cagtccctggc cccaccacgt 450
 aatctgatga tcgatatcca gaaagacact gcggtggaag gtgaggagat 500
 tgaagtcaac tgcactgcta tggccagcaa gccagccacg actatcaggt 550
 ggttcaaagg gaacacagag ctaaaaggca aatcggagggt ggaagagtgg 600
 tcagacatgt aactgtgac cagtcagctg atgctgaagg tgcacaagga 650
 ggacgatggg gtcccagtga tctgccagggt ggagcaccct gcggtcactg 700
 gaaacctgca gaccagcgg tatctagaag tacagtataa gcctcaagtg 750
 cacattcaga tgacttatcc tctacaaggc ttaaccggg aaggggacgc 800
 gcttgagtta acatgtgaag ccatcgggaa gcccagcct gtgatggtaa 850
 cttgggtgag agtcgatgat gaaatgcctc aacacgccgt actgtctggg 900
 cccaacctgt tcatcaataa cctaaacaaa acagataatg gtacataccg 950
 ctgtgaagct tcaaacatag tggggaaagc tcaactcggat tatatgctgt 1000
 atgtatacga tccccccaca actatccctc ctcccacac aaccaccacc 1050
 accaccacca ccaccaccac caccatcctt accatcatca cagattcccg 1100
 agcagggtgaa gaaggctcga tcagggcagt ggatcatgcc gtgatcggtg 1150
 gcgtcgtggc ggtggtggtg ttcgccatgc tgtgcttgct catcattctg 1200
 gggcgctatt ttgccagaca taaagggtaca tacttcactc atgaagccaa 1250
 aggagccgat gacgcagcag acgcagacac agctataatc aatgcagaag 1300
 gaggacagaa caactccgaa gaaaagaaag agtacttcat ctagatcagc 1350
 ctttttgttt caatgaggtg tccaactggc cctattttaga tgataaagag 1400
 acagtgatat tgg 1413

<210> 61
 <211> 440
 <212> PRT
 <213> Homo Sapien

<400> 61
 Met Ala Ser Val Val Leu Pro Ser Gly Ser Gln Cys Ala Ala Ala
 1 5 10 15

gccagcctgc gcctgccccg cctgctgctg ctggacctca gccacaacag 450
cctcctggcc ctggagcccc gcacccctgga cactgccaac gtggaggcgc 500
tgcggctggc tggctctggg ctgcagcagc tggacgaggg gctcttcagc 550
cgcttgcgca acctccacga cctggatgtg tccgacaacc agctggagcg 600
agtgccacct gtgatccgag gcctccgggg cctgacgcgc ctgcggctgg 650
ccggcaaac ccgcattgcc cagctgcggc ccgaggacct ggccggcctg 700
gctgccctgc aggagctgga tgtgagcaac ctaagcctgc aggcctgcc 750
tggcgacctc tcgggcctct tccccgcct gcggctgctg gcagctgccc 800
gcaaccctt caactgcgtg tgcctcctga gctgggttgg cccctgggtg 850
cgcgagagcc acgtcacact ggccagccct gaggagagcg gctgccactt 900
cccgcccaag aacgctggcc ggctgctcct ggagcttgac tacgccgact 950
ttggtgccc agccaccacc accacagcca cagtgccac cacgaggccc 1000
gtggtgcggg agcccacagc cttgtcttct agcttggtc ctacctggt 1050
tagccccaca gcgcgggcca ctgaggcccc cagcccgccc tccactgccc 1100
caccgactgt agggcctgtc cccagcccc aggaactgccc accgtccacc 1150
tgctcaatg ggggcacatg ccacctgggg acacggcacc acctggcgctg 1200
cttggtgccc gaaggcttca cgggcctgta ctgtgagagc cagatggggc 1250
aggggacacg gccagccct acaccagtca cgcgaggcc accacgggtcc 1300
ctgacctggt gcacgagcc ggtgagcccc acctccctgc gcgtggggct 1350
gcagcgctac ctccagggga gctccgtgca gctcaggagc ctccgtctca 1400
cctatcgcaa cctatcgggc cctgataagc ggctgggtgac gctgcgactg 1450
cctgcctcgc tcgctgagta cacggtcacc cagctgcggc ccaacgccac 1500
ttactccgtc tgtgtcatgc ctttggggcc cgggcgggtg ccggagggcg 1550
aggaggcctg cggggaggcc catacacccc cagccgtcca ctccaaccac 1600
gccccagtca cccagggccc cgagggaac ctgcgcctcc tcattgcgcc 1650
cgccctggcc gcgggtgctc tggccgcgct ggctgcgggtg ggggcagcct 1700
actgtgtgcg gcgggggcgg gccatggcag cagcggctca ggacaaagg 1750
caggtggggc caggggctgg gccctggaa ctggagggag tgaaggctcc 1800
cttgagacca ggcccgaagg caacagaggg cggtggagag gccctgccc 1850

0944403-083001

gcgggtctga gtgtgaggtg ccactcatgg gcttcccagg gcctggcctc 1900
 cagtcacccc tccacgcaaa gccctacatc taagccagag agagacaggg 1950
 cagctggggc cgggctctca gccagtgaga tggccagccc cctcctgctg 2000
 ccacaccacg taagtctctca gtcccaacct cggggatgtg tgcagacagg 2050
 gctgtgtgac cacagctggg cctgtgtccc tctggacctc ggtctcctca 2100
 tctgtgagat gctgtggccc agctgacgag ccctaacgtc cccagaaccg 2150
 agtgcctatg aggacagtgt ccgccttgcc ctccgcaacg tgcagtcctc 2200
 gggcacggcg ggccttgcca tgtgtgtgta acgcatgcct gggcctgct 2250
 gggctctccc actccaggcg gaccctgggg gccagtgaag gaagctcccg 2300
 gaaagagcag agggagagcg ggtaggcggc tgtgtgactc tagtcttggc 2350
 cccaggaagc gaaggaacaa aagaaactgg aaaggaagat gctttaggaa 2400
 catgttttgc ttttttaaaa tatatatata tttataagag atcctttccc 2450
 atttattctg ggaagatggt tttcaaactc agagacaagg actttgggtt 2500
 ttgtaagaca aacgatgata tgaaggcctt ttgtaagaaa aaataaaaaa 2550
 aaaaa 2555

<210> 69
 <211> 598
 <212> PRT
 <213> Homo Sapien

<400> 69
 Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu Leu
 1 5 10 15
 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys
 20 25 30
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Ser Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Arg Leu Pro Arg Leu Leu Leu Leu Asp Leu Ser His Asn Ser
 95 100 105
 Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

0944403-063001

110					115					120				
Ala	Leu	Arg	Leu	Ala	Gly	Leu	Gly	Leu	Gln	Gln	Leu	Asp	Glu	Gly
				125					130					135
Leu	Phe	Ser	Arg	Leu	Arg	Asn	Leu	His	Asp	Leu	Asp	Val	Ser	Asp
				140					145					150
Asn	Gln	Leu	Glu	Arg	Val	Pro	Pro	Val	Ile	Arg	Gly	Leu	Arg	Gly
				155					160					165
Leu	Thr	Arg	Leu	Arg	Leu	Ala	Gly	Asn	Thr	Arg	Ile	Ala	Gln	Leu
				170					175					180
Arg	Pro	Glu	Asp	Leu	Ala	Gly	Leu	Ala	Ala	Leu	Gln	Glu	Leu	Asp
				185					190					195
Val	Ser	Asn	Leu	Ser	Leu	Gln	Ala	Leu	Pro	Gly	Asp	Leu	Ser	Gly
				200					205					210
Leu	Phe	Pro	Arg	Leu	Arg	Leu	Leu	Ala	Ala	Ala	Arg	Asn	Pro	Phe
				215					220					225
Asn	Cys	Val	Cys	Pro	Leu	Ser	Trp	Phe	Gly	Pro	Trp	Val	Arg	Glu
				230					235					240
Ser	His	Val	Thr	Leu	Ala	Ser	Pro	Glu	Glu	Thr	Arg	Cys	His	Phe
				245					250					255
Pro	Pro	Lys	Asn	Ala	Gly	Arg	Leu	Leu	Leu	Glu	Leu	Asp	Tyr	Ala
				260					265					270
Asp	Phe	Gly	Cys	Pro	Ala	Thr	Thr	Thr	Thr	Ala	Thr	Val	Pro	Thr
				275					280					285
Thr	Arg	Pro	Val	Val	Arg	Glu	Pro	Thr	Ala	Leu	Ser	Ser	Ser	Leu
				290					295					300
Ala	Pro	Thr	Trp	Leu	Ser	Pro	Thr	Ala	Pro	Ala	Thr	Glu	Ala	Pro
				305					310					315
Ser	Pro	Pro	Ser	Thr	Ala	Pro	Pro	Thr	Val	Gly	Pro	Val	Pro	Gln
				320					325					330
Pro	Gln	Asp	Cys	Pro	Pro	Ser	Thr	Cys	Leu	Asn	Gly	Gly	Thr	Cys
				335					340					345
His	Leu	Gly	Thr	Arg	His	His	Leu	Ala	Cys	Leu	Cys	Pro	Glu	Gly
				350					355					360
Phe	Thr	Gly	Leu	Tyr	Cys	Glu	Ser	Gln	Met	Gly	Gln	Gly	Thr	Arg
				365					370					375
Pro	Ser	Pro	Thr	Pro	Val	Thr	Pro	Arg	Pro	Pro	Arg	Ser	Leu	Thr
				380					385					390
Leu	Gly	Ile	Glu	Pro	Val	Ser	Pro	Thr	Ser	Leu	Arg	Val	Gly	Leu
				395					400					405

Gln Arg Tyr Leu	Gln Gly Ser Ser Val	Gln Leu Arg Ser Leu Arg	410	415	420
Leu Thr Tyr Arg	Asn Leu Ser Gly Pro	Asp Lys Arg Leu Val Thr	425	430	435
Leu Arg Leu Pro	Ala Ser Leu Ala Glu	Tyr Thr Val Thr Gln Leu	440	445	450
Arg Pro Asn Ala	Thr Tyr Ser Val Cys	Val Met Pro Leu Gly Pro	455	460	465
Gly Arg Val Pro	Glu Gly Glu Glu Ala	Cys Gly Glu Ala His Thr	470	475	480
Pro Pro Ala Val	His Ser Asn His Ala	Pro Val Thr Gln Ala Arg	485	490	495
Glu Gly Asn Leu	Pro Leu Leu Ile Ala	Pro Ala Leu Ala Ala Val	500	505	510
Leu Leu Ala Ala	Leu Ala Ala Val Gly	Ala Ala Tyr Cys Val Arg	515	520	525
Arg Gly Arg Ala	Met Ala Ala Ala Ala	Gln Asp Lys Gly Gln Val	530	535	540
Gly Pro Gly Ala	Gly Pro Leu Glu Leu	Glu Gly Val Lys Val Pro	545	550	555
Leu Glu Pro Gly	Pro Lys Ala Thr Glu	Gly Gly Gly Glu Ala Leu	560	565	570
Pro Ser Gly Ser	Glu Cys Glu Val Pro	Leu Met Gly Phe Pro Gly	575	580	585
Pro Gly Leu Gln	Ser Pro Leu His Ala	Lys Pro Tyr Ile	590	595	

<210> 70
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 70
 ccctccactg ccccaccgac tg 22

<210> 71
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

09914403-083001
T00220" E044560

<400> 71
cggttctggg gacgttaggg ctcg 24

<210> 72
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 72
ctgcccaccg tccacctgcc tcaat 25

<210> 73
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 73
aggactgccc accgtccacc tgcctcaatg ggggcacatg ccacc 45

<210> 74
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 74
acgcaaagcc ctacatctaa gccagagaga gacagggcag ctggg 45

<210> 75
<211> 1077
<212> DNA
<213> Homo Sapien

<400> 75
ggcactagga caacattctt cctttctgca ccactgcccg tacccttacc 50
cgccccgcca cctccttgct accccactct tgaaaccaca gctgttgga 100
gggtccccag ctcatgccag cctcatctcc tttcttgcta gccccaaag 150
ggcctccagg caacatgggg ggcccagtc gagagccggc actctcagtt 200
gccctctggt tgagttgggg ggcagctctg ggggccgtgg cttgtgcat 250
ggctctgctg acccaacaaa cagagctgca gagcctcagg agagaggtga 300
gccggctgca ggggacagga ggcccctccc agaatgggga agggatatcc 350
tggcagagtc tcccggagca gagttccgat gccctggaag cctgggagaa 400

Val	Pro	Ile	Asn	Ala	Thr	Ser	Lys	Asp	Asp	Ser	Asp	Val	Thr	Glu
			125						130					135
Val	Met	Trp	Gln	Pro	Ala	Leu	Arg	Arg	Gly	Arg	Gly	Leu	Gln	Ala
			140						145					150
Gln	Gly	Tyr	Gly	Val	Arg	Ile	Gln	Asp	Ala	Gly	Val	Tyr	Leu	Leu
			155						160					165
Tyr	Ser	Gln	Val	Leu	Phe	Gln	Asp	Val	Thr	Phe	Thr	Met	Gly	Gln
			170						175					180
Val	Val	Ser	Arg	Glu	Gly	Gln	Gly	Arg	Gln	Glu	Thr	Leu	Phe	Arg
			185						190					195
Cys	Ile	Arg	Ser	Met	Pro	Ser	His	Pro	Asp	Arg	Ala	Tyr	Asn	Ser
			200						205					210
Cys	Tyr	Ser	Ala	Gly	Val	Phe	His	Leu	His	Gln	Gly	Asp	Ile	Leu
			215						220					225
Ser	Val	Ile	Ile	Pro	Arg	Ala	Arg	Ala	Lys	Leu	Asn	Leu	Ser	Pro
			230						235					240
His	Gly	Thr	Phe	Leu	Gly	Phe	Val	Lys	Leu					
			245						250					

<210> 77
 <211> 2849
 <212> DNA
 <213> Homo Sapien

<400> 77
 cactttctcc ctctcttctt ttacttttcca gaaaccgcgc ttccgcttct 50
 ggctgcagag acctcggaga ccgcgccggg gagacggagg tgctgtgggt 100
 gggggggacc tgtggctgct cgtaccgccc cccaccctcc tcttctgcac 150
 tgccgtcttc cggaagacct ttccccctgc tctgttttct tcaccgagtc 200
 tgtgcatcgc cccggacctg gccgggagga ggcttgcccg gcgggagatg 250
 ctctaggggg ggccgcgggag gagcggccgg cgggacggag ggcccggcag 300
 gaagatgggc tcccgtggac agggactctt gctggcgtac tgctgtctcc 350
 ttgcctttgc ctctggcctg gtcttgagtc gtgtgccccca tgtccagggg 400
 gaacagcagg agtgggaggg gactgaggag ctgccgtcgc ctccggacca 450
 tgccgagagg gctgaagaac aacatgaaaa atacaggccc agtcaggacc 500
 aggggctccc tgcttcccgg tgcttgcgct gctgtgacct cggtacctcc 550
 atgtaccggg cgaccgccgt gcccagatc aacatcacta tcttgaaagg 600
 ggagaagggt gaccgcggag atcgaggcct ccaagggaaa tatggcaaaa 650

caggctcagc agggggccagg ggccacactg gacccaaagg gcagaagggc 700
tccatggggg cccctgggga gcggtgcaag agccactacg ccgccttttc 750
ggtggggccg aagaagccca tgcacagcaa ccactactac cagacggtga 800
tcttcgacac ggagttcgtg aacctctacg accacttcaa catgttcacc 850
ggcaagttct actgctacgt gcccggcctc tactttctca gcctcaacgt 900
gcacacctgg aaccagaagg agacctacct gcacatcatg aagaacgagg 950
aggaggtggt gatcttggtc gcgcagggtg gcgaccgcag catcatgcaa 1000
agccagagcc tgatgctgga gctgcgagag caggaccagg tgtgggtacg 1050
cctctacaag ggcgaacgtg agaacgccat cttcagcgag gagctggaca 1100
cctacatcac cttcagtggc tacctgggtca agcacgccac cgagccctag 1150
ctggccggcc acctccttcc ctctcgccac cttccacccc tgcgctgtgc 1200
tgaccccacc gcctcttccc cgatccctgg actccgactc cctggctttg 1250
gcattcagtg agacgccttg cacacacaga aagccaaagg gatcggtgct 1300
cccagatccc gcagcctctg gagagagctg acggcagatg aaatcaccag 1350
ggcggggcac ccgcgagaac cctctgggac cttccgcggc cctctctgca 1400
cacatcctca agtgaccccc caccggcgaga cgcgggtggc ggcagggcgt 1450
cccaggggtg ggcaccgcgg ctccagtcct tggaaataat taggcaaatt 1500
ctaaagggtct caaaaggagc aaagtaaacc gtggaggaca aagaaaagg 1550
ttgttatttt tgtctttcca gccagcctgc tggctcccaa gagagaggcc 1600
ttttcagttg agactctgct taagagaaga tccaaagtta aagctctggg 1650
gtcaggggag gggccggggg caggaaacta cctctggctt aattctttta 1700
agccacgtag gaactttctt gagggatagg tggaccctga catccctgtg 1750
gccttgccca agggctctgc tggcttttct gagtcacagc tgcgagggtga 1800
tgggggctgg gggcccaggc gtcagcctcc cagagggaca gctgagcccc 1850
ctgccttggc tccaggttgg tagaagcagc cgaagggctc ctgacagtgg 1900
ccagggaccc ctgggtcccc caggcctgca gatgtttcta tgaggggcag 1950
agtccttgg tacatccatg tgtggctctg ctccaccctt gtgccacccc 2000
agagccctgg ggggtggtct ccatgcctgc caccctggca tcggctttct 2050
gtgccgcctc ccacacaaat cagccccaga agggccccgg gccttggctt 2100

					110						115						120
Ala	Arg	Gly	His	Thr	125	Gly	Pro	Lys	Gly	Gln	Lys	Gly	Ser	Met	Gly	135	
Ala	Pro	Gly	Glu	Arg	140	Cys	Lys	Ser	His	Tyr	Ala	Ala	Phe	Ser	Val	150	
Gly	Arg	Lys	Lys	Pro	155	Met	His	Ser	Asn	His	Tyr	Tyr	Gln	Thr	Val	165	
Ile	Phe	Asp	Thr	Glu	170	Phe	Val	Asn	Leu	Tyr	Asp	His	Phe	Asn	Met	180	
Phe	Thr	Gly	Lys	Phe	185	Tyr	Cys	Tyr	Val	Pro	Gly	Leu	Tyr	Phe	Phe	195	
Ser	Leu	Asn	Val	His	200	Thr	Trp	Asn	Gln	Lys	Glu	Thr	Tyr	Leu	His	210	
Ile	Met	Lys	Asn	Glu	215	Glu	Glu	Val	Val	Ile	Leu	Phe	Ala	Gln	Val	225	
Gly	Asp	Arg	Ser	Ile	230	Met	Gln	Ser	Gln	Ser	Leu	Met	Leu	Glu	Leu	240	
Arg	Glu	Gln	Asp	Gln	245	Val	Trp	Val	Arg	Leu	Tyr	Lys	Gly	Glu	Arg	255	
Glu	Asn	Ala	Ile	Phe	260	Ser	Glu	Glu	Leu	Asp	Thr	Tyr	Ile	Thr	Phe	270	
Ser	Gly	Tyr	Leu	Val	275	Lys	His	Ala	Thr	Glu	Pro						
											280						

<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
cccgggtgctt gcgctgctgt gacccccgga cctccatgta cccgg 45

<210> 82
<211> 2284
<212> DNA
<213> Homo Sapien

<400> 82
gcggagcatc cgctgcggtc ctcgccgaga cccccgcgcg gattcgccgg 50
tccttccgcg gggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100
ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150
cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200
gacaaaaact aaactgaaat ttaaaatgtt cttcggggga gaaggagct 250
tgacttacac tttgtaata atttgcttcc tgacactaag gctgtctgct 300
agtcagaatt gcctcaaaaa gagtctagaa gatgttgtca ttgacatcca 350
gtcatctctt tctaaggga tcagaggcaa tgagcccgta tatacttcaa 400
ctcaagaaga ctgcattaat tcttgctgtt caacaaaaaa catatcaggg 450
gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500
acccaactgc tacctatctt tctgtcccaa cgaggaagcc tgtccattga 550
aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600
ttgaccagaa atttgccaag ccaagagtta cccaggaag attctctctt 650
acatggccaa ttttcacaag cagtactcc cctagcccat catcacacag 700
attattcaaa gccaccgat atctcatgga gagacacact ttctcagaag 750
tttggatcct cagatcacct ggagaaacta tttaagatgg atgaagcaag 800
tgcccagctc cttgcttata aggaaaaagg ccattctcag agttcacaat 850
tttctctga tcaagaaata gctcatctgc tgctgaaaa tgtgagtgcg 900
ctcccagcta cgggtggcagt tgcttctcca cataccacct cggctactcc 950
aaagcccgcc acccttctac ccaccaatgc ttcagtgaca ccttctggga 1000
cttcccagcc acagctggcc accacagctc cacctgtaac cactgtcact 1050

0944403-083001

tctcagcctc	ccacgacctc	catttctaca	gtttttacac	gggctgcggc	1100
tacactccaa	gcaatggcta	caacagcagt	tctgactacc	acctttcagg	1150
cacctacgga	ctcgaaaggc	agcttagaaa	ccataccgtt	tacagaaatc	1200
tccaacttaa	ctttgaacac	aggggaatgtg	tataacccta	ctgcactttc	1250
tatgtcaaat	gtggagtctt	ccactatgaa	taaaactgct	tcctgggaag	1300
gtagggaggc	cagtccaggc	agttcctccc	agggcagtgt	tcagaaaaat	1350
cagtacggcc	ttccatttga	aaaatggctt	cttatcgggg	ccctgctctt	1400
tgggtgtcctg	ttcctgggtga	taggcctcgt	cctcctgggt	agaatccttt	1450
cggaaatcact	ccgcaggaaa	cgttactcaa	gactggatta	tttgatcaat	1500
gggatctatg	tggacatcta	aggatggaac	tcggtgtctc	ttaattcatt	1550
tagtaaccag	aagcccaa	gcaatgagtt	tctgctgact	tgctagtctt	1600
agcaggagggt	tgtattttga	agacaggaaa	atgccccctt	ctgctttcct	1650
tttttttttt	ggagacagag	tcttgctctg	ttgcccaggc	tggagtgcag	1700
tagcacgata	tcggctctca	ccgcaacctc	cgtctcctgg	gttcaagcga	1750
ttctcctgcc	tcagcctcct	aagtatctgg	gattacaggc	atgtgccacc	1800
acacctgggt	gattttttga	tttttagtag	agacgggggt	tcaccatggt	1850
ggtcaggctg	gtctcaaact	cctgacctag	tgatccaccc	tcctcggcct	1900
cccaaagtgc	tgggattaca	ggcatgagcc	accacagctg	gcccccttct	1950
gttttatggt	tggtttttga	gaaggaatga	agtgggaacc	aaattaggtg	2000
attttgggta	atctgtctct	aaaatattag	ctaaaaacaa	agctctatgt	2050
aaagtaataa	agtataattg	ccatataaat	ttcaaaattc	aactggcttt	2100
tatgcaaaga	aacagggttag	gacatctagg	ttccaattca	ttcacattct	2150
tggttccaga	taaaatcaac	tgtttatatc	aatttcta	ggatttgctt	2200
ttctttttat	atggattcct	ttaaaactta	ttccagatgt	agttccttcc	2250
aattaaatat	ttgaataaat	cttttggttac	tcaa	2284	

```
<210> 83
<211> 431
<212> PRT
<213> Homo Sapien
```


0944403-083001

305	310	315
Ser Leu Glu Thr Ile Pro Phe Thr Glu	Ile Ser Asn Leu Thr Leu	
320	325	330
Asn Thr Gly Asn Val Tyr Asn Pro Thr	Ala Leu Ser Met Ser Asn	
335	340	345
Val Glu Ser Ser Thr Met Asn Lys Thr	Ala Ser Trp Glu Gly Arg	
350	355	360
Glu Ala Ser Pro Gly Ser Ser Ser Gln	Gly Ser Val Pro Glu Asn	
365	370	375
Gln Tyr Gly Leu Pro Phe Glu Lys Trp	Leu Leu Ile Gly Ser Leu	
380	385	390
Leu Phe Gly Val Leu Phe Leu Val Ile	Gly Leu Val Leu Leu Gly	
395	400	405
Arg Ile Leu Ser Glu Ser Leu Arg Arg	Lys Arg Tyr Ser Arg Leu	
410	415	420
Asp Tyr Leu Ile Asn Gly Ile Tyr Val	Asp Ile	
425	430	

<210> 84
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 84
 agggaggatt atccttgacc tttgaagacc 30

<210> 85
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 85
 gaagcaagtg cccagctc 18

<210> 86
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 86
 cgggtccctg ctcttttg 18

Asp	Ala	Lys	Asn	Ala	Ile	Glu	Ala	Leu	Gly	Ser	Lys	Glu	Ile	Arg
			170						175					180
Asn	Met	Lys	Phe	Arg	Ser	Ser	Trp	Val	Phe	Ile	Ala	Ala	Lys	Gly
			185						190					195
Leu	Glu	Leu	Pro	Ser	Glu	Ile	Gln	Arg	Glu	Lys	Ile	Asn	His	Ser
			200						205					210
Asp	Ala	Lys	Asn	Asn	Arg	Tyr	Ser	Gly	Trp	Pro	Ala	Glu	Ile	Gln
			215						220					225
Ile	Glu	Gly	Cys	Ile	Pro	Lys	Glu	Arg	Ser					
			230						235					

<210> 92
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 92
 aatgtgacca ctggactccc 20

<210> 93
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 93
 aggcttgga ctccttc 18

<210> 94
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 94
 aagattcttg agcgattcca gctg 24

<210> 95
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 95
 aatccctgct cttcatggtg acctatgacg acggaagcac aagactg 47

<210> 96
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 96
ctcaagaagc acgcgtactg c 21

<210> 97
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 97
ccaacctcag cttccgcctc tacga 25

<210> 98
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 98
catccaggct cgccactg 18

<210> 99
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 99
tggcaaggaa tgggaacagt 20

<210> 100
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 100
atgctgccag acctgatcgc agaca 25

<210> 101
<211> 19
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 101

gggcagaaat ccagccact 19

<210> 102

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 102

cccttcgcct gcttttga 18

<210> 103

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 103

gccatctaata tgaagcccat cttccca 27

<210> 104

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 104

ctggcggtgt cctctcctt 19

<210> 105

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 105

cctcggtctc ctcactgtg a 21

<210> 106

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

099444080001

0-9-67-440-83-0003

tggcccagct gacgagccct 20

<211> 21

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

ctcataggca ctcggttctg g 21

<211> 19

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

tggctcccag cttggaaga 19

<211> 30

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

cagctcttgg ctgtctccag tatgtaccca 30

<211> 21

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

gatgcctctg ttccctgcaca t 21

<211> 48

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

69

[illegible]

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

ctatgaaatt aaccctcact aaagggaccg cagctgggtg accgtgta 48

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

ggattctaatacgactcactatagggccgc cccgccacct cct 43

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

ctatgaaatt aaccctcact aaagggactc gagacaccac ctgaccca 48

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

ggattctaatacgactcactatagggcccaaggaaggcaggagactct 48

<213> Artificial Sequence

<223> Synthetic Oligonucleotide probe

ctatgaaatt aaccctcact aaagggacta gggggtggga atgaaaaa 48

<210> 117

<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 117
ggattctaatacgcactcactatagggccccctgagctctcccgtgta 48

<210> 118
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 118
ctatgaaattaacctcactaaaggggaaggctcgccactggtcgtaga 48

<210> 119
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 119
ggattctaatacgcactcactatagggcaaggagccggggacccaggaga 48

<210> 120
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 120
ctatgaaattaacctcactaaagggagggggcccttggtgctgagt 47

09944403 083001